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Original Communications.

CÆSAREAN SECTION.*

BY J. GARLAND SHERRILL, M.D.,

Professor of Surgery, Kentucky University, Medical Department.

LOUISVILLE, KY.

This operation has been practiced since 1498, when Jacob Nufer, a butcher, of Switzerland, successfully performed it upon his own wife. The first treatise upon the subject was written by Rousset, 1581, and the operation was strongly opposed by Ambrose Pare and others. Trautman, of Wittenberg, in 1610, was the first physician to employ this method of delivery. Since then, with improved technique, the decreasing mortality has broadened the indications for the operation, and within the past few years it has been proposed in the treatment of conditions in which it was formerly not considered. This is notably the case in placenta previa, for which condition the Cæsarean operation was first proposed by Huston Ford,† of St. Louis, in 1892, and later by A. Palmer Dudley,†† of New York, and by G. M. Boyd,§ of Philadelphia. These three authors have arrived at the same conclusion, which is that "Cæsarean section and the Porro operation are not only justifiable, but in reality indicated in complete and central ectopic implantation of the placenta." The maternal mortality in this condition, as usually treated, ranges from 16 to 40 %, and that of the child 50 to 83 %, as given by the different writers on the subject.

In the face of such a high death rate, is it not surprising that a more satisfactory method of dealing with these cases is to be sought? It is claimed that the Cæsarean operation performed in such cases after the child is viable, to the exclusion of any other method of treatment, will save a much larger percentage of children than the usual methods of delivery. The plea is made by the advocates of this operation for placenta previa that the child has a claim upon life which ought not to be ignored. Personally, I believe this claim should be given great consideration, yet I believe the child should be known to be alive before the mother is subjected to this operation for placenta previa, except where fetus dead and uterus septic, as one of the chief reasons for its performance, is removed by the death of the child. Zinke,§§ of Cincinnati, says: "My own experience with the treatment of forty cases of placenta previa by tampon, separation of placenta around the cervix, forcible dilatation, version, and extraction contents, and of one case of Cæsarean section (Saenger method) convinced me that the latter procedure will accomplish the best results." He performed this section for marked cicatricial contractions in the vagina caused by a previous labor with the aid of version and craniotomy, the patient being the victim of a well pro-

* Read before the Louisville Surgical Society, April 6, 1903. For discussion see page 31.

† *Am. Gynecol. and Obst. Journal*, Sept., 1892.

†† *New York Medical Journal*, Nov. 3, 1900.

§ *Obstetrics*, April, 1901.

§§ Trans. Am. Asso. Obstetricians and Gynecologists. Vol. 14, 1901. Page 137.

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nounced justo minor pelvis. He was deeply impressed by the ease with which the operation was performed, the small amount of blood lost, and the promptness of the mother's recovery. He places his maternal mortality with the usual treatment of placenta previa at 17.5 %, and the fetal at 55 %. He has collected eight cases, six of which were treated by the classical Cæsarean and two by the Porro operation, of these, five mothers were saved and six children lived. These cases, with his comments, are so valuable that I include just as he has given them:

Case I. Hypes and Hulbert. No particulars except as given by Bernays "that the operation was done under very unfortunate conditions (probably everything else had been tried), and both mother and child were lost."

To what is the bad result to be charged in the case? The Cæsarean section? The previous attempts at delivery? or the surroundings of the patient? As for myself, the Cæsarean section was probably not the cause, but you my choose for yourself.

Case II. I. M. Sligh. A rigid, probably malignant, cervix. Tampons, forcible dilatations with a steel dilator, Barnes' bags and bimanual version; profuse and frequent hemorrhages for a period of seven days preceded Cæsarean section. Place of operation: A boarding-house. The patient much exhausted, with a temperature of 102° F., pulse 118, probably septic at the time of operation. Duration of operation, 35 minutes. Patient died in 12 hours. Fetus dead two days.

Can any one justly attribute the fatal issue in this case to the Cæsarean section? Certainly not. Had this brave man been guided less by the rules laid in the past and performed Cæsarean section before his patient was exhausted by hemorrhages and the serious, protracted and harmful manipulations, who can say that his patient would necessarily have died because the operation was performed in a boarding-house? Dr. Sligh was severely criticised by Rosenberg for making a hysterotomy under the circumstances; but, judging from Sligh's reply, he is fully able to take care of himself. His answer is entirely satisfactory.

Case III. Bernays. Patient bled alarmingly at intervals for about twelve hours. Tampons, recumbent position in bed with hips elevated was the only treatment employed prior to the operation. Patient was not in labor. Cervix patulous. Duration of operation, twenty-four minutes and forty-five seconds. Mother recovered completely in twenty-six days. Child was extracted alive, but died in a few hours of asphyxia, due to imperfect closure of the foramen Botallo. Operation took place at the home of the patient.

Might the life of this child have been saved? and could the mother have recovered more promptly and with less injury had she been delivered in the accustomed and sanctioned fashion?

Case IV. Lawson Tait. Hemorrhage profuse for five hours. "Many other orthodox treatments" prior to the Porro operation. Patient's condition "fair." Os closed and rigid. Mother and child lived, but the latter died, one month old, of bronchitis.

Could a better result have been obtained by any other method in the hands of a more skilled operator?

Case V. Donoghue. Cæsarean section was performed about thirty-three hours after hemorrhage first showed itself. Bleeding occurred at intervals and was very profuse at the last. There were no other attempts at delivery by any other method; but the patient was much exhausted, had symptoms of collapse, a temperature of 99.4°, and a pulse of 140. Patient was in labor; os patulous. The operation, of forty-five minutes' duration, was performed in a country house. Both mother and child lived.

Surely a better result could not have been obtained by any other means.

Case VI. Hare. Patient had bled at intervals for twenty-nine days; slightly at first, copiously toward the

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last. There is no record of any other attempt to deliver; but patient's condition at time of operation is given as very weak, and rapid, feeble pulse. Labor beginning; os patulous. Operation performed at hospital in thirty minutes. The mother died in eleven hours, but the child lived.

There is no doubt in my mind that the patient was doomed when brought to the hospital because of the loss of blood sustained in consequence of long delay. The bleeding during the operation was trifling. Had the patient been delivered by forcible dilatation of the cervix and version with immediate extraction of the child and placenta the result to the mother would have been the same, but as to the life of the child very doubtful.

Case VII. Covington. Place of operation, hospital. Repeated and alarming hemorrhages for a period of five weeks controlled by tampons. No other methods to deliver employed. Patient was very weak and exhausted at time of operation, and not in labor. The performance was nearly bloodless, and both mother and child were saved.

Wonder what criticisms the result in this case will call forth when read by the conservatives?

Case VIII. Gillette. Place of operation, hospital. Patient bled repeatedly for two months prior to the Porro-Cæsarean section that was made, and quite profusely, especially toward the end. Tampons, rest in bed and the usual treatment were employed to check the flow. No attempt at delivery per vaginam. Patient very weak, and pulse 135 at time of operation, which lasted thirty minutes. Both mother and child lived.

Can anything be more gratifying than the results in this case? Here, then, we have the results of eight cases of central or complete placenta previa, six of whom were subjected to the Cæsarean and two to the Porro operation. Of these, five mothers were saved and six children lived. The superficial observer and the "juggler" with statistics, if it suited his purpose, would at once exclaim: *What an awful mortality!* But let us be fair and actuated by one motive only—*that of obtaining the real truth.* However much one may desire to attribute the result in the Hypes-Hulbert and the Sligh cases to Cæsarean section, it cannot be done in real sincerity or honesty of purpose. Of the first we know little, except that the operation was performed under very unfavorable circumstances. Because of this, and in the absence of every other detail, the case deserves no consideration whatever, and is introduced here only for one reason: to avoid the accusation of having omitted it intentionally to suit the occasion. Sligh's case, also, cannot in all candor be placed to the charge of Cæsarean section. In all fairness, and with perfect justness, indeed, the patient and her child lost their chance for life irretrievably, because the doctor proceeded and treated the case according to the principles and rules laid down by the best authorities; and when he had exhausted every legitimate resource, and it became evident that his patient would die if not delivered soon, he went out of his way and took advantage of the last available, but at that time, unrecommended recourse—Cæsarean section. The failure to save this patient must be placed at the door of the tampon, forcible dilatation, Barnes' bags and bimanual versions. Had the doctor performed Cæsarean section at once, it is more than likely that both lives would have been saved, even though the operation had to be done in a boarding-house, which in and of itself is no positive contra-indication; indeed it is entirely justifiable to do so in an emergency. It may be said that the doctor ought not to have attempted dilatation, because he found the cervix subsequently the site of malignant disease; but he did not know of its presence in the beginning and only began to suspect it when he failed to secure complete dilatation. The case, in fact, should also be ex-

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cluded from any considerations. If it and the Hypes-Hulbert case prove anything at all, it is that Cæsarean section is indicated in the beginning and not the end of the management of it.

"This, then, reduces the number of cases to six, four Cæsarean and two Porro operations. Out of the six, five mothers lived and all children were born alive. One of the children died of asphyxia, the result of imperfect closure of the foramen between the auricles of the heart; another died a month after birth of bronchitis. As the death of neither can be attributed to the operation, we cannot but say that all children were born alive. One thing is certain—the early death of these children is no argument against these operations for placenta previa. I have therefore no hesitation in claiming that at the present time, with only six cases deserving of record, we have a maternal mortality of 17 % and a fetal mortality of nil in the treatment of placenta previa by the aid of the Cæsarean and Porro operations."

A close perusal of Zinke's classic article, taken in connection with my own experience of one case of Cæsarean operation, convinces me that in cases of central and complete placenta previa, with a living child, this operation is the method of choice, and if performed without the usual methods of delivery being tried first, will show a much lower mortality than by the usual methods, and so many children will be saved that it will occasion surprise that it was not employed long ago. It may be urged that the operation can only give such results in skilled hands and that in unskilled hands the mortality would be increased. The same may be said of the usual treatment of placenta previa, in which the best obstetricians report a fetal mortality of over 50 % and a maternal of 16 to 40 % save the two reports of Fry, of Washington, and De Lee, of Chicago.(4a)

What would the mortality be in the hands of a tyro?

Equally successful results are recorded by individual operators in Cæsarean operations undertaken for other reasons, as Pollak* reports 150 cases of Cæsarian operation performed upon 58 women with loss of but one patient, and she died of embolism after the fifth operation. Zweifel, Olshausen and Reynolds have reduced the mortality from the Cæsarean operation to less than 3 %, and Zinke quotes 16 authors with an average maternal mortality of 4.14 %, fetal 13 %. I fully realize that it is a step in advance to recommend the operation, but I am convinced that time will justify the claims Zinke and others have made in connection with this subject.

The indications for the Cæsarean operation are given usually as absolute and relative. The absolute indications are—

(1) A pelvis which will not permit the delivery of a child at term without great damage to maternal structures, and is usually given as a conjugate diameter of 7 cm. or less with living child, and 4.5 cm. or less with a dead child.

(2) Obstruction to the outlet by a tumor of uterus, ovaries or pelvis not removable at time of labor.

(3) Atresia of the genital tract.

(4) Rupture of the uterus.

(5) Cancer of cervix or vagina (advanced and rigid).

(6) Sudden death of mother.

One case reported where living child was delivered after mother had been dead 24 hours. (Death from febrile conditions will usually make efforts to save child futile).

(7) With dead child and uterus septic.

The relative indications are moderate contraction of the pelvis in which the

(4a) Fry, of Washington (*Am. Med.*, June 29, 1901), reports 14 cases with no maternal deaths and loss of five children.

De Lee, of Chicago (*Am. Gynecology*, August, 1901), gives 51 cases of placenta previa treated by colpeurynter, etc., with one maternal fatality and fifteen fetal deaths, four premature non-viable; five died before he saw cases; six died during recovery.

* *American Journal of Obstetrics*, No. 37, page 721.

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life of the child will be risked in the effort to deliver, as with prolapse of the cord, and where forceps and version have to be abandoned for craniotomy, symphysiotomy or Cæsarean section (Pinard states, and I fully agree with him, that craniotomy is never justifiable with a living child); puerperal eclampsia where delivery urgent, parts narrowed and forceps delivery with rapidity cannot be expected.

The indications for a Porro operation or for pan-hysterectomy are tumors of the uterus, cancer of cervix, vaginal cicatrices which will interfere with lochial flow, infection of the uterus from a dead fetus or improper treatment, very rarely hemorrhage after the conservative operation or placenta previa, rupture when some time has elapsed and sepsis begun. All care should be exercised to weigh the chances from every side and the patient's family and herself, if possible, consulted before the final decision is reached. Having decided upon the operation, it should be done without delay if labor has commenced; if labor has not begun and the demand is not urgent, the results will be better if the operation is delayed until it begins. In eclampsia or placenta previa it is not necessary to await the onset of labor. The best operation is undoubtedly the conservative operation of Saenger, the mortality of which is less than that of the Porro.

It is hardly necessary to state to this Society that the utmost care should be used to obtain an aseptic condition, and the vagina as well as the abdomen should be rendered sterile just as for hysterectomy. In my opinion a long abdominal incision should be made just sufficient to allow the uterus to escape from the abdomen. This permits ready and rapid delivery and prevents the child becoming asphyxiated by the obstruction of the uterine circulation. It also favors the escape of the amniotic fluid externally, thus protecting the peritoneum. With the uterus outside of the abdomen, the hemorrhage can be readily controlled by the assistant's hands or a rubber tube thrown around the uterus to be tightened after the child is delivered. McDearmid points out the following objections to delivery of the uterus: the long cicatrix and liability to hernia, the great exposure of the viscera. The first holds good here no more than in fibro myomata, moreover it must be long enough to allow delivery of the child, and the second is not tenable, for if properly done the intestines are not seen at all. In case the liquor amnii is excessive, it can be released by rupture of the membrane through the vagina before the operation is begun. As soon as the uterus is brought out, and preparation made to control hemorrhage, it is incised, preferably on the anterior surface, perpendicularly, and, if possible, away from placental site. Some advise different points for incision, but none are superior to the one mentioned. As soon as the knife enters the uterine wall, contraction causes the wound to enlarge so that the delivery of the child becomes quite easy. The membranes should be ruptured with the finger and the child delivered if it does not spring out, which should be looked for lest it be injured. The cord is clamped with two hamostats and cut, while an assistant or nurse receives the child. The uterus, which has been held by an assistant, who has also checked the hemorrhage, is now relieved of the placenta and the membranes, care being taken to prevent their retention, as contraction rapidly takes place. Flushing is unnecessary, unless a dead fetus with slight infection is present. The uterine muscle is then sutured with interrupted sutures of fine silk chromicized catgut about one-half inch apart, over these the peritoneum is joined by interrupted or continuous Lembert sutures of catgut. The gauze protective is then removed from between the uterus and the abdominal wall and the uterus replaced. The abdomen is then closed without drainage and the wound covered with gauze, held in place by adhesive straps and a binder. Some au-

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thors advise that the omentum be brought down to cover the uterus as far a possible. Dixon,* of St. Louis, advises that it be placed behind the uterus to prevent adhesions in front. I believe it makes no difference where the omentum lies, hence I would not advise any search for it. The chances of infection are practically nil, as the only peritoneum exposed is that covering the uterus and that near the incision. Many writers urge that steps be taken to prevent future pregnancy such as ligature of the tubes, partial excision, and the like. I feel sure that in view of the fact that cases are on record where three or even four Cæsarean operations have been done successfully on the same woman, steps to produce sterility should rarely be taken. When the indications mentioned above are present the Porro operation can be done; under other circumstances the classic operation is the safer.

The Porro operation is performed in the same manner up to the delivery of the uterus through the abdominal incision. Then a rubber tube is thrown loosely around the cervix. Some recommend that a piece of sterile rubber sheeting with a small hole in its center be slipped over the uterus down to the neck to prevent the escape of fluids into the peritoneal cavity. The same result can be obtained by using gauze pads between uterus and abdomen. The rubber tube is tightened, the uterus incised and the child delivered. This should be accomplished very quickly, lest the child become asphyxiated from occlusion of the blood from the uterus. The placenta and membranes may be delivered or not as the case may be and the uterus amputated just above the rubber band. A Koeberle noeud is placed about the stump under the rubber, and the stump transfixed by two pins, care being used to avoid including the bladder wall. After the noeud is tightened, the rubber band is removed and the pedicle fixed in lower angle of the wound; the latter is closed and dressed as in hysteromyomectomy. A complete removal of the uterus with suture of the upper part of the vagina may be used instead of this method, and is to be preferred in septic cases with a drain into the vagina if desired.

My own case was performed for small conjugate diameter with prolapsed cord and was done largely for the sake of the child, as it was deemed impossible for it to be delivered per vaginam alive.

Mrs. W. H., white, age 21, primip., April 24, 1902. Apparently well developed and in good condition. Labor began on the 23d, at 5 p.m. L.O.A. position of vertex. Drs. Humphrey and Tuley, after careful examination, had concluded that the patient could not be delivered of a living child in the normal way. Her conjugate diameter was found to measure 7 cm., and the head failed to engage at the superior strait. The cord was prolapsed, pulsating, and could not be successfully replaced, and Cæsarean section was considered to be indicated. After a thorough preparation of the abdomen under chloroform anesthesia, administered by Dr. Humphrey with the assistance of Dr. Tuley, I performed this operation. The abdominal incision was made at 10:15 and extended above the umbilicus. The uterus was opened in the median line after it had been delivered from the abdomen and a rubber tube thrown loosely around the cervix. At 10:17 the child was delivered through the uterine incision, and the hemorrhage, which was very slight, readily controlled. The placenta, which was placed on the left side of the uterus, was removed with the membranes, and the operation was completed as described above. The ease with which the operation was performed was very noticeable. Union occurred by first intention in eight days, and convalescence was uninterrupted. Drs. Varble and Richardson rendered valuable assistance in resuscitating the child, which was somewhat asphyxiated. Both mother and child left the infirmary in good condition.

In 1894 Gould collected 13 cases

*American Journal Medical Sciences, August, 1902.

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operated on before labor, 10 women and 13 children saved.

Six operated upon at beginning of labor, all saved.

Twelve cases operated upon after labor had been in progress from two to six hours, 10 women and 11 children saved.

Eighteen cases in labor seven to twelve hours, 8 women and 13 children saved.

This seems to indicate that the best time to operate is at the beginning of labor.

In closing, I would urge that this operation be performed early, and not as a *dernier ressort* after the patient is exhausted.

Since this paper was written, I have operated once for placenta previa at seventh month, saving the mother. The child lived about five minutes.

St. Charles' Place.

REFLEX NEUROSES.*

BY WILLIAM CHEATHAM, M.D.,
LOUISVILLE, KY.

Knapp (*Am. Jour. Med. Science*, October, 1895) defines reflex neuroses as follows: "A slight change occurs in some organ, not sufficient to attract particular attention to the organ itself, to interfere materially with its functions, or to cause noticeable pain or discomfort in it. This change irritates the terminal sensory nerves of the affected organ, and the irritation is communicated to connecting fibres of the ganglionic or spinal nerves and thus conveyed to a distant organ which may be anatomically healthy. This irritation may excite in the distant organ phenomena which stimulate a morbid condition in it, the organ responding most violently to this slight abnormity, as the alarm gong sounds in answer to the tap on the button of the distant station."

In his conclusions he says: "And we all must admit that the essential feature in the production of many neuroses is the neuropathic state—the degeneracy of the subject."

In any case of reflex neurosis to which I may refer in this paper, I admit, and wish to impress the fact, that degeneracy of the nervous system is at the bottom of it all. We cannot exclude the general condition of the patient in the consideration of this subject. In this paper I wish to confine myself to nasal reflex as a cause of disease of the eye.

Kyle (page 162 in Diseases of the Nose and Throat) says: "By a reflex neurosis of the nose is meant a phenomena having its origin in nasal excitability or nervous instability. For the production of a reflex act, there are necessary, an afferent sensory nerve, an efferent motor nerve, and between them a vague nervous mechanism called a reflex center; an impulse started as a purely motor may end up at its destination as vasomotor."

Bosworth (page 111, Diseases of Nose and Throat) says: "That the condition in the nose which more frequently causes reflex action is hyperemia rather than hypertrophy, I think, is fully borne out by clinical observation. Moreover, this is easily explained by the fact that hyperemia generally occurs in patients of a decidedly neurotic temperament." Hack, who was one of the first to attract attention to nasal reflexes, reported cases of gastralgia, transitory edemas, neuralgia, migrain, scotomata, photophobia, vertigo, exophthalmic goitre, cardiac palpitation, etc., said "simple hyperemia as indicated by sneezing, watery discharges, stenosis, alternating from one side to the other, are pathognomonic symptoms of a vaso-motor paresis of the blood vessels of the nose, such a condition as met with in the neurotic, the neurotic habit being the most active predisposing cause of nasal reflex." It might be suggested here that there might be some difficulty in differentiating between cause and effect in many of these cases. Kyle (page 176 in work already

*Read before the Medico-Chirurgical Society, April 17, 1903. For discussion see page 86.

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referred to) says: "Intimately connected and closely associated as are the nose and eye, if reflex action were found anywhere it would be natural to expect it here." For a few moments let us consider the nerve connection between the eye and nose, and other nerves.

Meckel's, or the spheno-palatine ganglion, is the center of distribution of the nasal nerves. According to Gray, this ganglion has a motor root, the large petrosal of the facial, which joins the vidian nerve, a sympathetic root from the carotid plexus, through the vidian nerve, and a sensory root from the fifth nerve. The branches of this ganglion Gray divides into ascending, internal and posterior. The ascending branches go to the optic nerve, the sixth nerve, and the ophthalmic ganglion. The ophthalmic ganglion gives off the short ciliary nerves which supply the ciliary muscle and iris.

The internal branches supply the mucous membrane covering the superior and middle turbinated bones, that lining posterior ethmoidal cells and the upper and back part of septum, the mucous membrane behind incisor teeth, and some branches to the septum. The posterior branches are the vidian and the pterygo-palatine which supply the lining membrane on the back part of the roof of the nose and septum, the end of the Eustachian tube, and the pharynx behind the Eustachian tube.

Again, the nasal branch of the ophthalmic supplies the mucous membrane covering the fore part of the septum of the nose, the fore part of the *outer* wall of the nares as far as the inferior spongy bone, and joins the facial nerve. It gives off a ganglionic branch which enters the ciliary or ophthalmic ganglion, also the long ciliary nerves, which pass on to the ciliary body and iris, with the infra-trochlear branch which supplies the integument of the side of the nose, the conjunctiva, lachrymal sac and caruncula lachrymalis.

So it will be observed that the nerve supply of the nose is connected with the whole of the cephalic portion of the sympathetic, which is composed of the ophthalmic, Meckel's, otic, and sub-maxillary ganglia, and through the vidian with the carotid plexus. It is also connected with the eighth pair through the carotid plexus, the eighth pair having three branches, namely, the glosso-pharyngeal, the pneumogastric, and the spinal accessory.

From this account it will be seen that the nerve connection between the lining of the nasal cavity and the general nerve system is as intimate as that of any other organ of the body; if this be true, then why may we not have a train of reflex symptoms from diseases of this mucous lining analogous to those resulting from diseases of the uterus, glans penis and stomach, and if this, why not the eye, when the connection is so very intimate? M. Rohmer (Annales d'Oculist, July, 1902) affirms that the superior cervical ganglion controls the vascularization of the posterior segment of the globe and that the ciliary ganglion controls the anterior segment.

At our last meeting, two weeks ago, I reported two cases of relapsing keratitis depending, I thought, upon nasal reflex. One of them, I stated, had not been under treatment long enough yet to decide positively that it depended upon nasal reflex. But it resembled so closely other cases I had treated and relieved by internasal treatment, I felt sure I would give him relief. In these cases we must distinguish between infection and reflex action. The cases I refer to are cases of transparent central ulcers of the cornea. In this paper I shall refer to the two I attempted to report at the last meeting.

Mr. F., age 27, had scarlet fever when 3 years old; since then has had several attacks of ulceration of the right cornea, for which he has been treated in Atlanta, St. Louis, Nashville and Cincinnati. He has been months getting relief in each relapse. There has nearly always been some photophobia present between the attacks. Vision of right eye equals 3-200. Large cen-

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tral superficial scar of cornea, with two or three transparent ulcers in the field and about the periphery of the scar. Although he is quite a healthy looking man, weighing 190 to 200 pounds, with good color, he says he has been sick a good deal and is nervous. None of his physicians have ever examined his nose. I found in the right nostril contact between the middle turbinal and the nasal septum, with great engorgement of the turbinal bones, which is relieved by cocaine, but which does not relieve this point of contact. On the septum opposite the middle turbinal is a horizontal ridge of edematous and engorged mucous membrane. A cotton-covered probe applied to these sensitive areas is immediately followed by increased eye symptoms; cocaine, as I said before, shrinks this tissue and relieves the reflex action to the eye. I put the patient on a tonic. He was not anemic. I gave him zinc phosphide and extract of nux vomica, also atropia and a salve of hyd. oxid. flav., cocaine and ichthyol for local use. Some oculists tell us that cocaine is contra-indicated in most of the forms of keratitis. This I tried three or four days with no relief. I then applied the galvano puncture to the turbinals and the edematous septum, and it was readily seen that the eye was much better in a few days. He came to see me April 1 and returned home April 15, greatly improved; he had considerable conjunctivitis, which improved rapidly also. He was much gratified with the result, as the improvement in his case had been so rapid compared to that in previous attacks. In this case, I admit, there has not yet been time to decide positively what the result will be. Sometimes I have had to repeat the cautery two or three times, destroying new areas of irritation. But it so clearly resembles other cases that I feel confident we can make a permanent cure. By this treatment to the nose I correct, I believe, the prime factor in the case. He should, of course, go ahead with his internal and local eye treatment.

Case No. 2 is in the person of a young lady, who had been treated in this city by three oculists. She came to me January 17, 1888. She had a thin, diffuse central opacity of her right cornea. She had several transparent corneal ulcers in the field of this opacity. She had slight convergent squint, which had been operated upon twice. She was highly neurotic, and has suffered much in late years of dysmenorrhea; she was to see me concerning relapsing keratitis, January, 1891; September, 1893; August, 1897; September, 1898, and after this date her attacks became more and more frequent. She wandered off once or twice to other oculists, when she got tired of or lost faith in me. Her family physician had her on all kinds of constitutional, and I on all kinds of local, treatment. She had to give up the use of her eyes entirely. About 1899 her attacks were quite frequent, and I found at this time I could cut them short and lengthen the interval very much by applying chromic acid, a 50 % solution, to the sensitive areas on the middle turbinal and the septum opposite, as the condition there was quite similar to the case I first reported. I threatened several times in the interim to use the galvanic cautery and kept putting it off until about eighteen months ago; I applied it as in case No. 1, which has given her entire relief since. She is still nervous and still has her dysmenorrhea, but no return of the eye trouble.

These are two cases only of several. I have seen many cases of asthenopia, which is of course only a symptom, and many cases of conjunctivitis relieved by treatment of the nose, when they had resisted all other forms of treatment. One of the gentlemen present stated in the discussion of these cases at our last meeting that this connection between diseases of the nose and the eye had not been proven. That he did not think it so, because the nose trouble was so common and such eye cases so scarce. This was curious reasoning to me, so without replying I decided to report my

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cases more fully and to look up the authorities on the subject, which I am pleased to briefly give you to-night.

In looking up the authorities, I find that about all of them accept the association of the nose as a cause of many diseases of the eye by reflex action. Especially diseases of the conjunctiva and cornea. The eye symptoms of hay fever, photophobia, edema of conjunctiva, heat, itching, can all be relieved by thorough cocainization of the nose. We often have sneezing as a reflex act from keratitis. Coffey (*Arch. of Ophthal.*, January, 1899) agrees with Snellen that follicular conjunctivitis is frequently associated with postnasal adenoids, and that their removal is often essential to the cure.

Lefrancois (*Rec. d' Ophthal.*, March, 1899) reports a case of serous iritis which resisted all treatment until the nares of that side was relieved of a thick caseous mass. Alt (*American Journal of Ophthalmology*, 1895) reported a case of optic neuritis following cauterization of the turbinals. H. F. Hansell reports a case of central scotoma consecutive to an operation for deviated septum (page 950 Gould's Year Book, 1897). MaxThorner (*Journal American Medical Association*) had a case of amaurosis of the right eye following the removal of a nasal polyp on that side. Chandler (*An. of Oph.*, January, 1897) reported several anomalies of eye muscles induced by enlarged turbinals. Bosworth (page 113) recognizes the close association between the nose and diseases of the eye, and says the result of the nasal treatment is "thoroughly satisfactory."

Hansell and Reber (Gould's Year Book, 1898, page 803) say in reference to the treatment of phlyctenular conjunctivitis, that simple remedies and attention to the nasal and intestinal tract is preferred.

Wells (*Philadelphia Medical Journal*, August, 1898) says: "In making your diagnosis of nasal reflex, see if the symptoms absent reappear upon contact of the probe with the sensitive areas and the symptom present disappears upon the use of cacaine."

Koenigshoefer (*Oph. Klinick*, January, 1901) reported a case of optic neuritis, with increasing dimness of vision, disturbance of color sense and limited field, which resisted all treatment, but got relief when a mass of adenoids was removed from the postnasal space. Nettleship (page 476) says: "Diseases of the nose are a most important cause of ocular diseases, and their treatment associated with other treatment leads to most prompt and complete recovery." Swanzy (page 222) says: "Especially inflammation of the respiratory tract from an acute catarrh of the Schneiderian mucous membrane to a severe pneumonia are closely associated with herpes cornea febrilis." May (page 107) says the nose should receive proper treatment in phlyctenular conjunctivitis. De Schweinitz (page 280) says: "Phlyctenular keratitis is in close connection with obstructive adenoid vegetations and inflammatory diseases of the nasal passages." On page 282 he gives the treatment for rhinitis in such cases. Page 297, in speaking of the treatment of corneal ulcers, he says: "The nasopharynx needs exploration and treatment." He also refers to carious teeth producing corneal ulceration, also new dentition in young children producing ulcerative keratitis and abscess of cornea. Why not the nose, then?

Wright (page 128) says: "Close examination of the mucous membrane of the nostrils will disclose the fact that in herpetic ulcer of the cornea it is affected." Also (page 134) he says: "In phlyctenular keratitis it is important that the nasal passages should be examined and treated if diseased." Norris and Oliver (Vol. IV., page 195) say: "In some exceedingly rebellious cases of phlyctenular keratitis adenoid vegetations may be found in the throat, and their extirpation is followed by rapid healing of the eyes. Page 198 they give the treatment of coryza in such cases. Page 407 they say, nasal re-

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flexes must be considered in asthenopia. Kyle (page 196) gives many important affections of the eye, including phlyctenular ophthalmia, trophic changes in the cornea and glaucoma, as depending upon reflexes from the nose. Page 100 he speaks of optic neuritis from the same cause. Bosworth (pages 100 to 111) recognizes the close association. Noyes (186) says: "I have long recognized an intimate relation between nasal catarrh, chronic conjunctivitis and asthenopia." Page 197 he reports an interesting case of Neidens in the person of a physician, age 44, whose eyes gave out in 1886. He consulted competent oculists, who gave him many pairs of glasses; he had headaches, could not use his eyes, heat at the vertex, fear of light, lacrymation, facial neuralgia, red lids, etc. The symptoms resisted all internal and local treatment given by the best of oculists. It was finally discovered that his nasal passages were very narrow from congestion and thickening; the lining of the nose was very sensitive, tender to the touch, and that his eye symptoms were improved by application of cocaine to the nasal mucous membrane. A septal projection was removed and other treatment was applied to the nose, which gave him rapid relief. Within a few months he laid aside his glasses and all bad symptoms had disappeared.

Page 353, Noyes says: "We have herpes cornea febrilis seu catarrhalis seu labialis and herpes zoster ophthalmous. The former follows acute affections of the respiratory tract from the nose downward."

Jackson (page 263), after giving the local and dietary treatment for phlyctenular conjunctivitis, says: "Next in importance is the careful treatment of the nasal passages." Page 582, he says: "Acute coryza is commonly attended with conjunctival hyperemia and increased lacrymation, which frequently passes into an acute catarrhal conjunctivitis or blepharitis. That catarrhal rhinitis is a common cause of relapsing phlyctenular conjunctivitis and keratitis, its cure may be essential to prevent relapses."

The two cases I report are only two of many I have seen in which a nasal reflex was the cause of the trouble; cases in which all other forms of treatment had been tried with failure, and which yielded only when the nose was treated. In adenoids the cause may not be entirely reflex; primarily obstructive, then engorged nasal tissue with mouth breathing and all its bad effects, depraved nervous system, then a nasal reflex.

MENTAL DEFECTS OF CHILDREN AND THEIR PREVENTION.*

BY PERRY WOOLERY, M.D.,
HELTONVILLE, IND.

I consider it one of the greatest pleasures of my professional life to be able to represent the graduating class of 1897 with a paper which I trust will be of some interest to you all.

It comes in the way of every general practitioner of medicine, who pays much attention to diseases of children, to meet with what I call "insane disorders" or "mental defects." I wish to consider these along the line of causation and result or from a standpoint of heredity and environment. Insanity arising from the same source whence it comes in the adult is rare in childhood, but mental defects are very common and grow worse with startling rapidity unless most wisely handled in their incipiency. All those minor mental deflections or shortcomings which may escape our attention form the fertile ground for an everlasting mental condition to take ready root. Many are the causes of a disturbed or disorganized condition of the mental faculties of the child.

Active disease frequently disturbs the cerebral functions, and these may not recover with the subsidence of the acute process, even though the structural change be small. When this does oc-

*Read before the annual meeting of the Alumni Association of the Louisville Medical College, Louisville, Ky.

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cur, it is very important to carefully direct even the simplest educational and disciplinary measures, in order to inhibit further lapses and regain healthy tone. My purpose is to call attention to the casual factors which should be scrutinized by the family physician as soon as the least ground for apprehension arises, and after a consideration of these point out how to deal with a suspicious phenomena.

The causes of these mental states are many and wide reaching. Some are the outcome of depressed physical powers, due to want, misery and crime. Many more are the result of careless usages, complications and vice. In certain parental tendencies there is great danger of some form of insanity or imbecility. Vitiated appetites, as for alcohol, opium, or even tobacco, interlace with other things, or are themselves good ground for disease of mind as well as body.

Tuberculous families frequently present instances of acute nervous disease, terminating in swift fatalities, and also offering little resisting power against exciting causes. There are families of notably unstable nervous equilibrium, in whom acute disease or emotional disturbance play sad havoc. Cultivation of the emotions in the way of mundane or heavenly things, or on the contrary asceticism or self-repression may exercise a decided hurtful effect upon the offspring.

When these various causes which I have mapped out (with numerous others not mentioned) become superadded one to the other, by the marriage of a tubercular father to an hysterical mother, or an alcoholic father to an over-conscientious, highly spirited mother, disaster may be predicted for their children.

I know personally a family in whom it is said conception took place while the father was intoxicated, and the result was a boy that has all his life, of sixteen years, acted precisely like a drunken man, and has had an uncontrollable appetite for liquor. Many observations have been made in which one parent or both parents were very intemperate in some one or more things, and their offspring were imbecile or insane to the same degree, or even worse. This is especially noticeable in regard to sexual disorders. Again, upon the impressionable nature of the developing nervous tissues of a child already hypersensitive by heredity, exciting causes always act overwhelmingly.

Acute febrile disease commonly produces delirium in a child, which is in itself a transient insanity, and this may pass utterly away, or leave an indelible stain on the cerebrum. But after all the chief factors in the causes of mental defects may be summed up in two words—*heredity* and *strain*. The former is responsible for instability of the nervous system, while the latter is multiform in character, comprising all the physical and mental stresses, direct and indirect, and from environment, which may undermine the nervous constitution and bring it to a point of collapse.

In determining the factors of heredity we must not be content with ascertaining the existence of psychoses in the antecedents, but must seek by careful interrogation of several members of the family for some of the hereditary equivalents of insanity, such as epilepsy, chorea, hysteria, eccentricities of character, drunkenness, etc., for these equivalents are interchangeable from one generation to another, and are simply evidences of instability of the nervous system.

The statistics in regard to insane disorders are frequently faulty, because in the first place the physician fails to inquire far enough into the transmissible neuroses, and in the second place the relatives are prone to conceal any supposed hereditary taint in the family.

In the class coming under the head of *strain* the cause may be physical or mental.

The childish brain is very vulnerable at all times, and demands for its best development slow and undisturbed op-

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portunities and wholesome conditions. Very much mental stimulus is always hurtful, although pure intellectual pushing is said by Charcot *not* to be harmful, provided other moral and physical conditions are maintained. The emotions evidence themselves first in mere animal delightedness, even then running along the line of ancestral traits. Here the parental coloring of mind, habit, or exterior is shown in curious faithfulness of detail. Even at this stage bad habits may be sketched in upon the receptive centers and form the ground for future calamity.

The exciting causes of mental defects in the child differ in some respects from those of the adult. Digestive disorders and intestinal parasites cause a variety of nervous troubles, but very rarely insanity. Hurtfully directed moral causes are very efficient factors in disturbing the mind both temporarily and often more seriously. The shock of fright or overwhelming dread is powerful for harm even in perfectly healthy children.

Religious teachings of a lurid hyperbolic type act as a lever by which great harm is wrought. Superstition is another potent factor that will frequently dethrone unstable minds. Acute disease is a fertile source of harm. A scarlet fever, or typhoid, especially if accompanied by hyperpyrexia, very often reduces a perfectly healthy child to an imbecile or a maniac. A brutal drunken man causes terror and woe to young children, as example is almost as powerful for harm as ancestral traits. Children subjected to long periods of want and exposure are certain to fail of right development and to leave some stain in the moral sense if not in mental acuity. Hence the waifs and strays gathered up by the municipality or by philanthropic societies are of questionable mentality and demand unusual care in implanting seeds of morality and right conduct. These must receive a more primitive form of instruction than others who have enjoyed a better start in life.

The fundamental concepts or ideas being at fault, too advanced instruction only confuses.

Mental defects, or insane disorders, is meant to include not only insanity, but that admixture of insanity and hysteria which is ofttimes indistinguishably blended. Nor must hysteria in the larger significance of the term be excluded. It offers all the superficial appearances, but is wanting in testamentary clinical findings. The similarity has especially to do with the phenomena of onset, and while pre-eminently an imitation, it is not *all* or *nearly* all true simulation.

In children it is rarely suspected, but always possible, so soon as the receptive faculties and power to form concepts are fairly established. The distinction between these two closely resembling conditions is ofttimes a purely relative matter, to be decided partly by the personal factor of the observer or the social or individual standard of the patient. Again hysteria and organic brain disease may co-exist, often *not* in the child, 'tis true, but will then prove most puzzling. A large familiarity with hysterical states increases ones respect for the difficulties of differential diagnosis from insane disorders.

The collateral evidence must guide the physician in making up his mind. Hysteria in children *must* have some sort of an audience always, and when vanity can be detected or gravely suspected it will help to determine the nature of the attack. The instinct of the physician is always a help, but must not be masked by prejudice. No one has better formulated the principles of heredity in relation to insanity than *Mercier*, who points out besides the direct transmission of an unstable nervous system, *another* law of heredity, which is known as the law of *sanguinity*. Two persons may be perfectly healthy, and yet their children all be insane or idiotic. However, the child tends to inherit attributes of *both* parents, but it may inherit the qualities

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of one parent in one respect and of the other parent in some other respect. Or it may inherit the father's attributes for one period of existence, and the mother's for another. Attributes may be transmitted in latent form from one generation to another, to reappear in the third or fourth or even more remote generations, a phenomena called reversion. Insane ideas or attributes tend to appear in the progeny about the same time of life that they became manifest in the parents. Peculiarities of the father tend to be inherited by the sons, and those of the mother by the daughters. The perfect organization of the progeny is the result of three factors: The quality of the germ, which brings matter; the quality of the sperm, which brings force, and the suitability of one to the other.

A study of the above laws will explain many of the puzzling features of "psychopathic heredity," and why, for instance, only a few of the children of a neurotic parent suffer from nervous troubles, and why psychoneurosis may develop in the progeny of healthy parents. It must be remembered, too, that there is great difference in hereditary taint and its equivalents. One may be simple neurasthenia or eccentricities of character, while the other may be of a much more serious nature, such as epilepsy, chronic alcoholism, paranoia or imbecility. The taint in a family is greater the larger the number of children effected.

For instance, drunkenness in one generation may lead to a simple nervous condition in the next, to a complex degenerative psychosis, epilepsy, etc., in the third, and finally in the fourth to idiocy, sterility, and a complete annihilation of the stock. I think we are living in an age of progressive, hereditary degeneracy. Much study has of late years been devoted to these forms of insanity or mental defects of childhood, and it behooves all of us who have anything to do with the mental development of the child to familiarize ourselves with these signs of degeneracy in so far as they concern our own special line of work. I spoke of the two great causes of mental defects being *heredity* and *strain*. It is *heredity* which renders the nervous system unstable and the *strain* which causes the collapse. Doubtless there are limits of endurance in any organization, no matter how strongly balanced, if the strain be great enough. The strain may be physical or moral, often both. What delicate mind could withstand the assault of all these factors, heredity, physical ill-health and improper care?

It is difficult to estimate accurately the proportion of one cause as compared with another, since several are usually associated in the same case. That surprising condition known as precosity, which we regard as accidental because as yet we do not know how to explain it, is a source of peril, if not an absolute evidence of mental unsoundness. It is almost *never* a ground for parental gratulation and frequently only fulfills youthful promise. Not only that, but it predestines its possessor to an incurable neurosis. "They are as the flowers—born to blush unseen."

I once knew an expert mathematician in our own State University who was simply a marvel in his line. He could add the numbers with perfect ease and accuracy on a string of box-cars running at the rate of forty miles an hour. He was known for miles around as the "mathematical wonder." He died when less than twenty years of age in an epileptic fit. We find that when these children are so well developed in one particular thing they are almost invariably very shallow on all the other branches. You may flatter your pride by forcing your child to know more than other children, but you are making a sacrifice of that child. You think you are adding to its intelligence, but you are subtracting from its future.

To know how to best deal with these conditions, without a clear decision as to whether one has to do with an ineradicable vice or a removable disorder, is a matter of vast importance.

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The great number of these cases are at the mercy of the family doctor, and upon him rests the great responsibility of their early physical and moral training.

In speaking of the treatment of these "insane disorders," or "mental defects," if you prefer to call them such, a great deal can be said. I would urge, however, that such measures be adopted as will act along the line of *prevention* rather than any therapeutic or disciplinary measures. *Prevention* is paramount to *cure*.

As like begets like, the nervous system bows to the law of all life—the law of *heredity*. The law that governed your birth and mine, and laid a heavy burden on some of us that will endure even to the third and fourth generations. Next to the omnipresent, inevitable law of inheritance comes the never ceasing power of environment. This law begins at birth and closes with the end of life, but childhood and youth are the plastic stages in which the future of the child is moulded. "As the the twig is bent, so is the tree inclined."

We must cultivate the body of the growing child. Develop him physically by careful and regular diet, regular hours of sleep, outdoor life, and efficient systems of exercise. Let his training be muscular rather than intellectual, manual training rather than lessons, especially in the early years of childhood. No schools until the age of 7 or 8 years. The child with degenerate tendencies should be forbidden all nervous stimulants, such as tea, coffee, wines or tobacco. Seek to develop the resisting powers of the organism to all external stimuli, and accustom his mind to the courageous endurance of pain and mental stress. A child who is made to have hard muscles, strong lungs, a vigorous digestion, and can bear changes in temperature, is almost sure *never* to become a nervous wreck, but will associate himself with the higher ideals of human life. Two great errors in the early training of children present themselves to my mind:

First, by leading the child into duties and pleasures beyond his years, and

Second, by bringing up the child under what I call centripetal development —development centering in *self*.

It creates a feeling of importance that is never overcome by the child.

Another grave mistake that is made is the lurid teaching of *fear*. It paralyzes judgment, ambition, and higher emotions.

Let them *work*. Let them labor with their hands. Many an invalid, many a neurasthenic, and many a hysterical man or woman would be stable and strong if they would work instead of worry—if they could but realize that the greatest growth of any living tissue was attained by alternating *activity* and *repose*.

Guard well the epoch of puberty, and if you succeed in passing this period in either sex without any outward signs of insanity, you have accomplished a great work. But listen:—there is a *greater* responsibility and a *greater* prophylactic measure to be taken than the training of the child.

It is in the prevention of intermarriage of criminals, drunkards, epileptics, consumptives, syphilitics, feeble-minded degenerates, and blood relation. I think the time is not far distant when every State will pass laws pertaining to the legality of marriage of the above-named classes. A medical counsel will be appointed in every county to examine every applicant and pass on the issuance of every marriage license.

Another law that should be passed and enforced is the one advocating the castration of a certain class of criminals. It would put an end to some of their vicious habits, and place them on a higher plane of life. Some of our profession are too conservative in their views to undertake so radical a remedy, but I can see no reasonable objection to operative procedures in such cases. However, ligature of the vas deferens, or possibly section of some branch of the pudic nerve might serve as well.

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At any rate some method of this kind is worthy of consideration, though the opinion of the profession as to its utility and propriety has yet to be learned.

I think the above suggestions, if carried out, are the only sure preventives of "mental defects" of childhood, either from *heredity* or *environment*, that I can conceive of that will have any noticeable effect on the future generations of our race.

It has been suggested that all the degenerates be put under State control where they can be taken care of humanely, safely, and at a minimum cost. When *all* these things have been done, and when the family doctor does his duty toward the family, by warning the parents and prospective parents of the dangers accompanying the mental development of their future posterity and its moral training, we will soon see and realize a great change. We will feel that we have done our best for humanity, for men are but children of a larger growth, and childhood shows the man as morning snows the day.

"The tissues of *their* life to be,
We weave with colors all our own;
And in the fields of destiny
They reap as *we* have sown."

SCROTAL HERNIA OF THE BLADDER.

BY JOHN H. RHODES, M.D.,
JACKSON, MISS.

In September, 1896, I was called to operate upon what was supposed to be a case of strangulated inguinal hernia. The patient, a prominent negro of Hinds county, was 78 years old, and had suffered more or less all of his life with incontinence of urine and also a tumor in left inguinal region. Occasionally during the past twenty years he had had considerable pain and uneasiness over and around region of tumor, and different physicians had advised the wearing of a truss, but on account of great tenderness produced by pressure of instrument it was each time abandoned. Several months preceding operation patient had been carried through an attack of malarial fever, and was still weak and very much debilitated. Three days before operation he had a severe chill, followed with high fever, vomiting, diarrhea, and pain in region of tumor. The family physician was called and the case was diagnosed as one of strangulated hernia and the usual methods of reduction attempted without success. Consultation was held the next morning, chloroform was administered, and another effort at reduction made without a satisfactory result and an operation was decided upon.

With a temperature of 103° and pulse 140 and a patient 78 years old, I did not feel much encouraged to undertake the operation. However, under strict antisepsis an incision of about 3½ or 4 inches was made, beginning a little above the internal ring and extending well down over the tumor. Layer after layer was carefully divided until the supposed characteristic sac was reached, the usual guide in all operations for hernia. After a most careful examination the characteristic fluid could not be seen, and I decided it was the bladder. Cleansing my hands and thoroughly irrigating the parts, I directed my assistant to introduce a sound as high up in the urethra as possible, and after some manipulation it was withdrawn and there followed a small quantity of urine. This confirmed my suspicion and diagnosis. The sound was re-introduced, which further excited tenesmus, and compression was made at the same time on the tumor and about two tablespoonfuls of urine passed out into a cup. Upon a further more rigid examination and persistent pressure on the wall of the tumor, the circular muscular fibre of bladder could now be distinctly outlined and my diagnosis was now confirmed. The constriction was relieved and the bladder pushed back to its normal position and

*Reported at the Annual Reunion of the Alumni Association of the Louisville Medical College, Louisville, Ky.

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as much as possible of the remaining sac was cut away. The pedicle was ligated with silk and the pillars brought together with silkworm gut.

In about four hours a medium-sized catheter was introduced and about half an ounce of urine drawn off. The patient grew weaker, however, and died in about twelve hours after operation.

This case is reported on account of its exceedingly rare occurrence. Only recent works mention the fact that it does sometimes occur, and after considerable research I find only about sixty cases on record, eight of these having occurred in New York and were reported by Dr. Curtis in "Annals of Surgery," and in every case the operator cut through the walls of the bladder before a diagnosis was made.

PYLORIC STENOSIS.*

BY A. MORGAN CARTLEDGE, M.D.,
LOUISVILLE, KY.

Obstructive conditions about the outlet of the stomach constitute such a large percentage of organic stomach lesions that the subject is one of great interest to both physician and surgeon. Not until recent years, and, I am sorry to say, not in all quarters yet, has this condition been considered a surgical one.

Again, it seems that the profession does not duly appreciate the earlier manifestations of pyloric obstruction or at a time when surgical intervention would promise so much better results than are to be found in the neglected and moribund class of patients usually transferred to the surgical domain. That old abused term, indigestion, like malaria, is responsible for many imperfect diagnoses, and is oftentimes the cause of organic troubles of the stomach gaining such headway as to be wellnigh hopeless from any line of treatment. Unfortunately so many cases of pyloric stenosis are due to carcinoma that this has led the profession, when the diagnosis was made, to view the case from the standpoint of hopelessness.

Modern gastric surgery scarcely claims to cure pyloric stenosis of a cancerous origin, but it does claim to offer greater relief and longer prolongation of life than any other line of treatment. Increased operations upon this organ have all demonstrated that benign and permanently relievable stenosis of the pylorus are more common than was formerly supposed. As causes of this condition we have about in the order of frequency named: (1) carcinoma; (2) cicatricial stenosis following the healing of ulcers, these ulcers being in a large per cent. of cases traumatic, or in rarer instances specific; (3) obstruction from pressure from without the lumen of the bowel, such as inflammatory masses in connection with diseased gall ducts and disease within the head of the pancreas.

So-called indigestion, in some one of the many phases it presents, is the first symptom noted in pyloric stenosis. An incomplete emptying of the stomach contents within the physiological period that it should take, this leading secondarily to fermentative changes of the food product within the stomach. Of the changes in the wall itself, the first is that of hypertrophy, later to be followed by a dilatation which evidences itself in the change of contour of the stomach. By the time this third stage of dilatation is reached in the evolution of pyloric stenosis, grave and serious food retentions occur, to the extent that rejection of food contents by vomiting are to be expected.

This is the late diagnostic picture in pyloric stenosis. An earlier diagnosis may be made frequently by observing, in conjunction with slight retention of food products, tenderness and pain directly over the pylorus. This is especially true of the pyloric ulcer, which, if it escapes perforation, will probably lead to stenosis later on as a result of cicatricial contraction. Pain in the

*Read before the Louisville Medico-Chirurgical Society, Stated Meeting, April 8, 1908. For discussion see page 24.

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region of the shoulder blades, so common in gaseous distention of the stomach, is to be noted in many of these cases. This latter symptom, coupled with pain and tenderness directly over the pylorus, would indicate an ulceration at this point, with a hypertrophic stage of the gastric muscularis.

I do not think it is the best therapeutics to expend too much time in our endeavor to differentiate before operation as to the cause of a given pyloric stenosis. The most important element in the treatment of such cases is the early recognition that stenosis exists, and the institution of steps for its relief by surgical measures. The age of the patient, the presence or absence of tumor, the history of the case, the presence or absence of free hydrochloric acid in the stomach contents, are the usual methods of differentiation between malignant and benign stenoses. These diagnostic differentiations constitute the a-b-c of the differential diagnostic subject and are familiar to all practitioners.

What do we hope to do for these cases by surgical intervention? Simply this and little else—to create a new avenue for the circulation of food from the stomach proper into the lower digestive tract. Thus in malignant disease of an incurable kind, to prolong life and render its existence more comfortable. In a case of benign lesion, by thus creating a new avenue of food passage for food contents, and put at rest the diseased pylorus that it may cease to be irritated, heal, and if it should never functionate again as the result of cicatricial stenosis, we have demonstrated that in our artificial switch, properly planned, we have an arrangement capable of fulfilling all the requirements of the physiologic digestion and compatible with good health and long existence. Therefore, it seems that the claim we make for modern gastro-enterostomy in such cases well worth the consideration of the profession, justifying an effort at early diagnoses in these cases, that we may be the more susceptible to the benefits offered by surgical intervention.

In reviewing broadly the history of gastric surgery the mind most readily recalls the bold attempts at pyloric excision first attempted by Billroth. This first is rather a gloomy chapter so far as both immediate and permanent results were concerned, but it was only the forerunner of simpler, more ingenious and safer operations which are the practice of the present day, and which have made the department of gastric surgery as important, and considering the nature of the cases, as satisfactory as most intraperitoneal surgery.

Time will not permit a review of the various operations and their modifications which have been advocated from time to time for the purpose of anastomosis around the obstructed pylorus; sufficient to say that the two great desiderata were a means of quick and safe anastomosis, the subjects usually being so emaciated and starved as to preclude a long surgical operation, and second, a difficult early observation in the anastomosis of the stomach wall to the small intestine below, namely, the regurgitation of bile and pancreatic fluid through the artificial opening into the stomach. Many have been the suggestions and procedures to overcome these two difficulties. It is safe to say at the present time that the Murphy button is almost universally conceded to be the best method of making the approximation in gastro-enterostomy. It is quick, it is safe and more secure than any form of suturing. The few objections found to its use are far more than overcome by its many advantages.

As to the second problem, bile regurgitation, American surgeons, especially Dr. W. J. Mayo, of Rochester, have demonstrated the simplest method here is far the best, namely, an anastomosis between the jejunum and the anterior wall of the stomach at the most dependent part, or as near the greater curvature of the stomach as will permit an avoidance of the large blood vessel, the gastro-epiploric artery. A gastro-

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enterostomy performed after this method will usually not require more than twenty-five minutes for its execution. No blood is lost, and there is practically no shock. If patients are not already starved, the operation adds little risk itself.

In connection with the paper I wish to present a case operated upon on January 27. At that time he was very much emaciated and has gained forty pounds in the short period since. He has a complication as a result of his starvation which has manifested itself in a nephritis, which we hope to relieve. The history of this case dates back about two years. The case is as follows:

J. G., age 40. Fairly well developed and nourished. Trouble dates back about two years. About the first of July, 1902, he went to Germany, as he was feeling badly, principally with symptoms of indigestion. The trip caused some slight improvement. About eight weeks ago symptoms of indigestion began to return with pain, quite severe at pyloric end of stomach. He vomited nearly all food taken, and this vomiting became more or less continuous, so that he has been practically starved during this time. There has never been any blood in vomitus. Constipation marked from beginning of trouble. He lost fifteen pounds in three weeks' time previous to operation. Four days previous to operation the bowels could not be moved. No glandular enlargement has been present in any part of the body. Examination of gastric contents shows presence of hydrochloric acid. At operation stomach was found to be dilated, but not markedly so. Pylorus obstructed by cicatricial mass about two inches in length and about one and one-half inches in breadth, extending from pyloric orifice to the left and on the posterior inferior aspect of stomach. A typical gastro-enterostomy was made between the jejunum about sixteen inches below colonic crossing and the most dependent portion of stomach wall anteriorally, the Murphy button being used. On account of inability to retain food by rectal enema it was found necessary to feed liquids by mouth, with the result that he filled up, and on account of fermentation stomach lavage was resorted to on the second day and on the three succeeding days. The contents on removal were very offensive in odor. Discharged about February 19, 1903.

This man would eat enormously for two or three days and then would come the vomiting stage. Careful examination revealed no symptom of carcinoma, and he did not have the cachexia of malignant disease. The history was negative so far as specific disease was concerned, and yet there was a scar on the glans penis which I believe plays a part in the causation. The diagnosis was pyloric stenosis of non-malignant origin. No tumor was present; it was of long-continued duration and operation was urged on account of this fact. No ulceration was found but white scar tissue which obstructed the pylorus. Could see evidence of profuse ulceration, inflammatory in character.

We had a most pitiful time in feeding this patient. We had to feed him by mouth. I have seen several cases of pyloric stenosis, but never saw such a ravenously starved man before. They are usually clamorous for food, but this man was not far from mania. As soon as the door was opened he would climb out of bed and commence clamoring. He was a most unpleasant subject to come in contact with. The button was discharged on the twelfth day very nicely. Since that time his bowels have moved all right. Subsequently he has gained enormously in weight in these eight weeks, and I am sure the starvation is responsible for this nephritis which has developed in the last few days. The edema of the face has already disappeared under treatment. He is uncontrollable so far as his eating is concerned, and he has made good use of the opening which he has acquired.

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I believe he will make a perfect recovery as soon as his kidneys improve. He has no bile regurgitation. I speak especially of that because it is one of the troubles of gastro-enterostomy. It proves that Mayo's plan of getting the most dependent portion of the stomach is the correct one. Since the button passed he has had a good, free opening, and no vomiting. This method of doing the gastro-enterostomy is simplicity itself. The actual time consumed was about twenty minutes, not including the abdominal wall. I did not soil three round sponges with blood, and it is quick and safe. The claim has been made that the button occasionally drops into the stomach instead of the intestine, but that disagreeable feature is offset by the advantages. Mayo says never tell the patient that a button has been used, and do not have them looking for it. Some cases remained in perfect ignorance four years without the button having passed. They are making a button now with one segment heavier than the other to facilitate its passage by gravity.

Society Proceedings.

ANNUAL MEETING OF THE ALUMNI ASSOCIATION OF THE LOUISVILLE MEDICAL COLLEGE.

The annual reunion of the Alumni Association of the Louisville Medical College, the second since the reorganization, was held in Louisville, March 23 and 24.

When the business session was called to order by the President, Dr. R. C. McChord, of Lebanon, Ky., at the college building there were present besides the graduating class over 100 of the old graduates.

After the transaction of business and the election of the graduating class to membership, the following papers were read:

Scrotal Hernia of the Bladder, by J. H. Rhodes, class 1882, Jackson, Miss. (See page 16.)

Adenoids of Infancy, by Dr. W. B. McClure, class 1883, Lexington, Ky.

Should the General Practitioner Operate? by Dr. H. C. Vaught, class 1891, Richmond, Ky.

The Mental Defects of Childhood, by Dr. Perry Woolery, class 1897, Heltonville, Ind. (See page 11.)

Treatment of Chronic Bright's Disease, by Dr. W. F. Boggess, class 1885, Louisville, Ky.

Cancer of the Intestines, by Dr. J. Garland Sherrill, class '88, Louisville, Ky.

Much interest was manifested and papers were actively discussed. The following papers were read by title:

Varicocele, by Dr. Quinn, class '83, Henderson, Ky.

Endometritis and Its Treatment, by Dr. Larue, class '94, Owensboro, Ky.

Officers for the ensuing year were elected as follows:

President—Dr. W. B. McClure, Lexington, Ky.

First Vice President—Dr. H. E. McKay, Bardstown, Ky.

Second Vice President—Dr. W. J. Leach, Sellersburg, Ind.

Third Vice President—Dr. M. P. Creel, Central City, Ky.

Secretary and Treasurer—Dr. Adolph O. Pfingst, Louisville, Ky.

The most enjoyable feature of the session was the banquet at the Galt House on the night of March 3, 1903. After the serving of the menu, during which the guests were entertained by an Italian string orchestra, a number of toasts were responded to. Dr. J. W. Fowler acted as toast-master in his own inimitable way, and called upon representatives of the State of Kentucky, Indiana, Tennessee, Mississippi, North Carolina, Louisiana, Nebraska, Oklahoma and Texas to respond for their respective States.

Dr. C. W. Kelly made the "hit" of the evening with his toast, "Dry Bones," which was a continuous flow of

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good humor and wit intermingled with reminiscences of former college days.

On the morning of March 24 surgical clinics were held at the City Hospital by Dr. Sherrill. At 2 o'clock the graduating exercises of the class of 1903 were held at Macauley's Theater. Fifty-three men received the right to practice their chosen profession.

The first honor of the Senior class was awarded to Dr. Ed. B. Long, of Ind., which carries with it the internship at the City Hospital of Louisville. The Junior, Sophomore and Freshman honors were respectively taken by John T. Hunn, of Kentucky; D. S. Conner, of Indiana, and Porter Norton, of Oklahoma. Dr. J. D. Maguire, of Kentucky, received the appointment as resident physician to the St. Joseph Infirmary at Lexington, and Dr. W. H. Lovejoy a similar position in the State Charity Hospital of Vicksburg, Miss.

The Salutatory address, by Dr. John D. Miller, of Mississippi, and the Valedictory address, by Dr. J. D. Maguire, of Kentucky, were both characterized by a certain freshness and by their brevity, differing thus from the usual stereotype long-drawn-out addresses.

Gen. Basil Duke made an address full of wit and interest in which he beautifully eulogized the life of the lately deceased eminent pathologist, Prof. Virchow. The benediction was offered by the Rev. E. L. Powell.

ADOLPH O. PFINGST, Sec.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, April 3, 1903, Dr. B. A. Allan, President, in the Chair.

PROLONGED INTUBATION.

DR. S. G. DABNEY: I wish to report the termination of the case of unusual intubation reported a month ago. You will remember that it was a case in which the necessity for the tube had appeared about four weeks after a sore throat, antitoxin having been administered at the time, and every time the tube was removed the child would choke up again very rapidly. I may say that after ten weeks, lacking two days, the tube was removed. It has now been out two weeks and the child has had no trouble at all. I took the child to the infirmary and had the tubes kept ready for any emergency. It seems to me that the termination of the case as well as the time of appearance and the course all point to the diagnosis made at the time of paralysis of the abductor muscles of the larynx. The child's health greatly improved while wearing the tube. It was finally removed without difficulty after being in a little over two months. This was the second time I had to keep the tube in for about two months; the other was a case of retained tube in diphtheritic laryngitis.

REFLEX NASAL NEUROSES.

DR. WM. CHEATHAM: I have had three or four cases lately of transparent central ulcer of the cornea dependent upon nasal trouble. The diagnosis was made by exclusion. Every other form of treatment was tried without effect, and the trouble was relieved by the cautery applied to the septum and middle turbinal. I have just discharged a case which was treated for months without relief until the application of the galvano-cautery. Chromic acid gave relief for several weeks, but relapses came until the cautery was used. I tried acetic acid and bichloride of mercury, 1 to 500, which, I think, gives better results, but they never got entirely well. I have a case on hand now which I think is one of the same kind of cases. He has been under treatment by doctors in various places, and has had trouble for twenty-five years, often being incapacitated for work. I think it will prove to be one of this class. He has thickening of the septum and swelling of the middle turbinal, which keep up this condition of the cornea, which breaks down every little while. I have seen a number of these cases. The text-books speak of nasal reflexes as a factor in the production of glaucoma, and why not this condition?

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DISCUSSION.

DR. S. G. DABNEY: With regard to the use of acetic acid in the treatment of corneal ulcer, I believe Fox, of Philadelphia, was one of the first to call attention to that, but I think it was in the treatment of infected yellow ulcer.

I think the points Dr. Cheatham raised are well worthy of study. We would have to have a great many such cases, however, before we can establish the casual relation between the nasal trouble and the corneal ulcer, for we see such a vast number of such nose cases, and the eye cases in conjunction with them are rare. The vast majority of corneal ulcers of this kind occur in patients who are run down in health. I have had one recently, a typical case with an old cicatrix of the cornea, the patient being very emaciated. I think the cornea may often be looked upon as an index of the general condition of the patient. I am often reminded of a remark made by a well-known oculist who said that he never treated a corneal ulcer that he did not wish he was as fine a general practitioner as his old preceptor. I think the causal relationship of nasal troubles must be taken with some degree of allowance. It is not yet positively established.

SUB-DIAPHRAGMATIC ABSCESS.

DR. A. M. CARTLEDGE: The case I report is that of a young married woman, 33 years of age, whom I first saw about six weeks ago. I was called to see her about 48 hours after the first onset of the symptoms, and she presented about this history: Last summer she had a severe attack of typhoid fever, and made a slow recovery; subsequently she was troubled with indigestion, from which she had never suffered before. She had been taking medicine for it most of the time since. On Tuesday night, six weeks ago, the family physician was called to see her, and found her with intense pain in the region of the stomach, although she had eaten nothing to disagree with her. He gave her some morphia, and was called in again and found her cold and showing evidences of shock. He gave her morphia and strychnia, which gave some relief. I saw her the next night, and her condition was one of shock, the abdomen was distended all over, and she was complaining of the most intense pain in the region of the stomach. She had vomited some chocolate-colored fluid, and pulse had come down from 160 to 123 when I saw her, and she was much more comfortable. I made a diagnosis of perforation of the duodenum, and as the symptoms showed a little improvement, I concluded to await developments. She gradually improved; pulse came down to about 110, but the distension was subsiding very slowly. She was removed to an infirmary, and remained there about five weeks. In the meantime, as the tympany subsided, a mass appeared along the lower border of the liver, back toward the loin and extending up toward the stomach. Her temperature was now about 101° in the evening; no sweats, but some sleeplessness. The pain was not very severe. The general peritoneal distension subsided, and diagnosis of sub-diaphragmatic abscess was made.

She was anesthetized and an incision made along the mass and the peritoneum was entered near where the transverse colon was matted up to the mass. I walled that off with sponges and separated the colon and out came the offensive material, probably a quart of it. The pus contained a lot of fine blood-clots and black granulated material and was not strictly fecal; it had a sour odor. This was well drained out and I went behind the hepatic flexure of the colon and made another incision at the border of the last floating rib. I passed in two large drainage tubes about seven inches in length and as large as my finger. She has gotten along remarkably well. She still had some fever and offensive discharge for several days, but all this disappeared and temperature became normal; she looks now like she is going to make a nice re-

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covery. (NOTE.—She has since made a good recovery.)

A curious coincidence occurred in connection with the case. The day I performed the operation some gentleman in New Jersey sent me a reprint of all the cases of this kind he had collected as well as of cases in his own practice. They all gave about the same history—sudden pain, shock—and some were operated on primarily with a large mortality, and some secondary; all of those that did not die immediately had subsequent abscess formation, all seeking the same direction, to the right instead of to the left. I still believe that all cases of this kind that are not seen right away, within the first six to ten hours, should be left until nature has thrown up a wall of adhesions.

While one case does not prove much, it proves that all are not fatal if not operated on at once.

DISCUSSION.

DR. WM. BAILEY: I would just spring the question as to how common these ulcerations are in connection with typhoid fever, as lesions of that kind are very common. It is very uncommon to have ulcer of the stomach or duodenum following typhoid fever, not as common as perforation of the ileum. It seems to me from the amount of shock that the perforation must have been very small. If a considerable quantity of the contents of the stomach had been poured out, nature would not have been able to have walled it off as it did. The doctor is to be complimented very much upon the success of the case. The majority of such cases would die whether operated on or not. They should either be operated upon within the first twenty-four hours or a time selected later on. The chances would not have been so good from the second day on up to the time the operation was performed.

DR. J. G. CECIL: I do not know whether I understood Dr. Cartledge to draw the inference that the ulceration of the duodenum was the result of the typhoid fever or not. I would like to have him refer to that in closing. It was some months after the typhoid fever when this ulceration and perforation took place. The history that he gives is much more like that of perforating ulcer of the stomach and duodenum, which is not so uncommon, and the period that elapsed would seem to shut out typhoid fever as having anything to do with it. Peptic ulcer is a common cause of sub-diaphragmatic abscess. At any rate, it is a very fortunate ending to a dangerous situation.

DR. A. M. CARTLEDGE: I do not know that there was any relation between the typhoid fever and this ulcer. I am sure that the ulcer was not lower down than the duodenum. The only reason I mentioned the typhoid was that there seemed to be some relationship. She had been a strong woman and never suffered from indigestion up to that time, but said she had never been well since the typhoid fever. She had indigestion, which indicated trouble about the pylorus, and had never regained her health since. It seems plausible that the foundation of the trouble was laid in that attack of typhoid, but there is not necessarily any intimate relation between them. The history points to the fact that she was never well after the typhoid and indigestion had been unknown previous to that time.

TUBERCULAR PERITONITIS.

DR. BEN CARLOS FRAZIER: During the fall a woman was referred to me who had had an attack of acute inflammatory rheumatism about ten months before. She had been in bed a number of months, one knee and hip being attacked, especially the knee. Since she had been able to get up she had had a stiff knee. During the summer she had been treated in Indiana with a hot-air machine and the doctor had burned her heel until she had an ulcer covering the entire bottom of it. I sent her to an infirmary and this healed quickly under wet dressing.

She complained of great pain over

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the abdomen and ovarian region, and it was curious to see that during all her ill-health she had remained fleshy. On this account it was very difficult to make an examination, but I did so and found some thickening of the cul-de-sac, and from the leucorrheal discharge I concluded it was gonorrheal rheumatism. I operated on her, expecting to find pus tubes, but instead I found the uterus and lower part of the bowel studded with tubercular deposits. Both tubes were removed and in the meantime this knee was straightened and the adhesions broken up. She made a good recovery, but was a subject of asthma and had some trouble while she was in bed. She has gone along very nicely and is able to walk well. She is now suffering with a great deal of pain in the region of the appendix and her pulse is a little quick. The nurse telephoned me to-night that she is suffering intensely; the woman stands pain very well, but the nurse thought she ought to have a little morphia. She had four or five doses in the early stage.

The question now is whether she is going into tubercular appendicitis, and if so, what is best to be done. She expected to leave the infirmary Monday. She lives in the country and her surroundings are not very good. This trouble had developed within the past forty-eight hours. She is not very sensitive over the abdomen, but is a little more so over the right side. There is not much distension. Her temperature has not been taken for several days. There is no evidence of gonorrhea or any abscess of tube or ovary.

Dr. A. M. Cbetledge: I think this case, unless there is a rapid elevation of pulse or other alarming symptoms, is a good case to wait on. Possibly it may develop into a case of appendicitis, but there are so many of these severe abdominal pains that I would be suspicious of tubercular peritonitis at the bottom of it. Partial obstruction may account for the symptoms. I believe I would be inclined to wait on her a few days

The essay of the evening, entitled "Pyloric Stenosis," was read by Dr. A. Morgan Cartledge. (See page 17.)

DISCUSSION.

Dr. J. G. Cecil: I cannot add much of interest. I think Dr. Cartledge's paper is very timely, and brings attention to a subject that is often postponed too long. Many of us are inclined to treat indigestion too long, and we do not go into the differential diagnosis as fully as we might and should do. This applies to pyloric stenosis as well as to chololithiasis. The early diagnosis of pyloric stenosis is often surrounded with many difficulties as to positive conclusions. Later on, when the stenosis is practically complete, and there is enormous dilatation of the stomach, diagnosis is very much easier. The age of the patient suggestive of cancer, previous history of the case, history of specific disease, history of gastric or peptic ulcer are all very suggestive, as well as persistent indigestion long after the symptoms of gastric ulcer have passed away. I do not think there is any doubt about the propriety of the steps suggested by the essayist looking towards permanent relief. It is certain that when the evidence of extensive stenosis is pronounced, medicinal treatment promises very little, so in such a hopeless outlook we should have recourse to surgery as soon as the case shows the nature of the trouble. This is fair to the patient and to the surgeon. I am not sufficiently familiar with the operations of gastro-enterostomy to criticise or comment upon the different kinds.

The case reported brings up an interesting question with regard to the cause of the acute nephritis. I do not recall that pyloric stenosis and the results following is given as a cause of nephritis, but it may be so. We all know, however, that persistent vomiting, not only empties the ordinary contents of the stomach, but also robs the system of most of the fluids of the body, and that results in a very scant

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secretion of urine. Of course, when the kidneys are robbed in this way of the fluids necessary to continuous action the uriniferous tubules become blocked up, and this would bring on an irritation which might certainly result in organic disease, such as Bright's. That is the only way I can see to establish connection between the two. I make that as a suggestion.

Dr. William Bailey: I should feel embarrassed were I to speak of the surgical aspect of the subject. Stenosis is often exceedingly difficult of diagnosis, and we are fortunate in having the surgeons come to our aid in these cases that would otherwise go on to death. I remember a case thirty years ago at the City Hospital of a woman with dilatation so marked that she would eat for three or four days and then vomit enormous quantities of food. At the post-mortem I remarked one result of dilatation I never heard of before, complete ante-flexion of the uterus, caused by the stomach pressing down on the pelvis. The stomach was found resting upon it. This case had gone on to death from inanition.

With regard to the kidney trouble, I think the prognosis will depend upon a critical examination of the kidney, whether it is acute or chronic Bright's disease. Examination by the microscope might determine something, and also whether there is any blood in the urine. The character of the disease of the kidney should be studied very closely. I see nothing in the disease itself to produce inflammation within the kidney. At the time this kidney manifestation developed the man was taking more food and getting more fluids and having better function than for a long while previously. The kidney should have been relieved, if anything.

I do not think specific trouble is often the cause of inflammation of the kidney. It is a disease so common that this may simply be a coincidence, Bright's disease occurring in a man who has had stenosis and been relieved of that. The question of the real condition of the kidney at present must be considered. If the condition is acute, there is much more hope for him than if it is chronic. But even then life might be carried on for several years. Since relief has already come to him within the last few days, the patient may be brought into a condition of reasonable health.

Dr. Louis Frank: I was very glad to hear this paper, and glad that Dr. Cartledge has performed and advocated gastro-enterostomy rather than operations such as Loretta's and others. I believe that with the operation done as Dr. Cartledge has suggested, at the most dependent portion of the stomach to do away with retention, we have an operation far superior to the others. In the old operations we have had reports of further trouble with stenosis. In the case of much thickening about the pylorus it was almost impossible to bring the wound together so as to obviate leakage. The greatest trouble has been due to the establishment of the viscous circle, due to anastomosis being made too high up. I have had the pleasure of assisting in a case of posterior anastomosis, and was surprised at the ease and rapidity with which it was done.

I believe that the button is the thing to use in these cases. In some experimental surgery I have done, I have followed the plan, instead of having one end of the button heavier than the other, of attaching to it some silk threads which drag the button down and cause it to pass readily. I do not believe the button in the stomach is occasion for alarm, but it is advisable not to tell the patient. A case was reported recently by Cordier, in which the button was found in the stomach seven years after the operation.

As to the kidney involvement, it occurs to me that after a period of starvation we have in all the organs a cloudy swelling, and I should think this might easily take place in the kidney and involve the epithelial cells lining the glomeruli, and so cause this trouble. Of course we cannot say what will be

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the outcome; that will depend upon what is found upon examination of the urine. But I am disposed to regard it as favorable, and think that the kidney will clear up.

Dr. B. C. Frazier: I have only to thank the essayist for the paper. I might say that I recall a case of an old lady, 68 or 70 years of age, who had chronic Bright's disease with organic heart lesion, and a short while before her death it was noticed that she had some trouble in the abdominal region. The tumor was in the region of the pylorus, but not connected with it, but there was some glandular enlargement of benign character. I assisted at the post-mortem, and we found a cancer of the pylorus with occlusion almost complete. Adhesions were thrown around the chronic ulceration, which was just broken through. Probably if she had lived a few more days the rupture would have been complete. Whether or not the Bright's was secondary to that it would be hard to say. She was practically an invalid for eighteen months, and at different times it was thought she could live but a few days. She had double senile cataract as well.

Dr. Ganz: As to examination of the urine previous to the operation in this case, it was made six times without any evidence of Bright's disease. This condition has entirely developed since last Saturday. It has been about eight weeks since the operation. Since he has been under treatment for the last three days he has passed three quarts of urine during the twenty-four hours. The urine has looked somewhat like the washings from meat, but it has now cleared up, and the edema has disappeared from the face. Never at any time previous to the operation were there any evidences of nephritis. We have not made microscopic examination yet because the urine has not yet sufficiently settled.

Dr. A. M. Cartledge: It is always my custom to examine the urine before an anesthetic is given, but Dr. Ganz had examined it several times already. Ether was used. When this condition turned up, I looked upon it as a result of the long starvation. I took it to be parenchymatous nephritis, and it looked like it had blood in it. I know nothing further as to that.

In regard to the operation, I can bear out what Dr. Frank said. I did not look favorably upon gastro-enterostomy at first. But it is the operation of choice, though there is still a field for some of the others in the case of narrow strictures. This is quick, and works very nicely in these cases. I did the Loretta operation on a man with carcinoma, who was able to take some food. He was shown here before this society. He could get food through, and enjoyed his food, but in about a month the obstruction was again complete. After that, when he was nearly dead, I did a pylorectomy.

So I say this is the operation of choice, as it is simple and effective. It is possible to suppose that the pylorus did dilate some. This case was inappropriate for the Hennicke operation because the cicatricial mass was too long. I think he will have a hard time opening up, but he may get some opening yet.

In regard to the buttons, experience shows that they will do well. Several operators have had the button made larger, but Murphy does not lean toward its use. Experience shows that there is very little trouble about the button.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, April 6, 1903, Dr. Ap. M. Vance in the Chair.

APPENDICITIS COMPLICATING GALL-STONES.

Dr. J. Garland Sherrill: I wish to report the following case: Mrs. R., aged 21, white; has one child two years old. In summer of 1902 she had several attacks of neuralgia of the face; also had one or two attacks of dysentery of mild type. In November she had an attack of typhoid which lasted three

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weeks. In the second week she miscarried a six months' fetus. A week or ten days after her recovery from typhoid she was suddenly seized with severe pain in right hypochondrium, lasting several hours. Every few weeks she had a similar attack, only relieved by morphia. She vomited with nearly every attack, and usually had a slight elevation of temperature. About six weeks ago she had an attack with jaundice, this being the only time this symtom was noted. At no time did she have pain over the appendix. Her physician, Dr. Gaddy, at one examination thought he felt a stone moving in the gall-bladder, which could be felt at that time. No stone had been discovered in her stools, which were clay-colored. She has been constipated since these attacks began, needing a purge each day. Examination reveals but slight tenderness over the gall-bladder. No tumor can be felt; liver dullness is increased. The appendix was readily palpable, and quite tender. Taking the history into consideration, a diagnosis was made of gall-bladder disease and an inflamed appendix.

A two and one-half inch incision was made from top of ninth rib downward along outer margin of rectus muscle. The small intestine was found adherent to liver and gall-bladder, the latter being closely attached to the liver by rather firm bands. After separating the intestinal adhesions the gall-bladder was found to be contracted, and the concretions could be felt through its wall. The bladder was opened, allowing the escape of a small quantity, perhaps half a dram, of mucus, and with it some small stones. Owing to the contracted condition of the gall-bladder, the failure to obtain bile and the probability of infection, it was decided to sacrifice it. The hemorrhage from the surface of the liver from which the gall-bladder was detached was very slight and readily checked. The colon was drawn upon until the appendix, which was considerably congested, presented. This was removed without difficulty, and the wound closed with a tubular gauze drain leading to point of enucleation of the gall-bladder.

Here are several of the stones, mostly small; some of them were lost. An interesting feature is that the adherent intestine shows a tendency to form a little ulcer; it was trying to protrude these stones into the intestine. I was unable to pass a probe into the common duct. The appendix was club-shaped, and quite congested. I take it that the best thing to do in the case of a septic gall-bladder is to take it away. Another interesting feature is that there was absolutely no tenderness over the seat of the gall-bladder during the last two days. She is not jaundiced now.

DISCUSSION.

DR. J. B. BULLITT: I am very much interested in the treatment of the gall-bladder. I believe it is coming to be a recognized surgical principle that we should treat the gall-bladder as we do the vermiform appendix, and extirpate it. This is the kind of cases in which that is indicated. It has been demonstrated that a certain percentage will have recurrent symptoms referable to the gall-bladder. Recurrences of stone occur in nearly all cases where there is stenosis of the cystic duct. The gall-bladder then fills up, and we get the same symptoms as the surgical cases. In cases of this kind the question arises whether it is better to do a cholecystectomy rather than a cholecystotomy. Another question is whether it is best to tie off the gall-bladder or furnish drainage from this point. In a case like that reported, I think it is proper to do what was done, and provide for any drainage of the biliary ducts, if there is any jaundice present.

DR. AUGUST SCHACHNER: I have only to endorse what the operator did in this case. Removal of the gall-bladder is easier than some of us think. We can cut the peritoneal reflections, and pull off the gall-bladder very easily. The operator could not have done anything else than what was done.

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Dr. J. G. Sherrill: This was one of those cases in which it is proper to remove the gall-bladder without providing drainage, because it had apparently been entirely isolated.

INVERSION OF THE UTERUS.

Dr. Irvin Abell: I wish to report a case of complete inversion of the uterus following parturition. It occurred in a girl 15 years of age, who denied the possibility of pregnancy, and was delivered in the upright position at about the fifth month of pregnancy. The cord was too short to allow the fetus to reach the floor, and was broken by the fall. In order to keep the matter secret the mother called in a person other than a regular physician, and he tried to deliver the afterbirth by traction on the cord. He did not succeed in doing this, but was forced to desist on account of the intense pain produced by the traction. The girl was put to bed, and the next morning at 10 o'clock the placenta came away. Hemorrhage followed, but the family physician was not called until late that night. I saw her early the next morning with him, and thought she would die within a few hours from the loss of so much blood. The pulse was so rapid it could not be counted, and respiration was hurried and shallow. On this account the use of an anesthetic for the purpose of reposition of the uterus was out of the question, so she was given saline, restoratives and stimulants. Examination revealed the fact that there was a complete inversion, and the mucous membrane of the uterus was continuous with that of the vagina. The mass was pyriform in shape, and filled the girl's vagina. From their description of the child and the afterbirth, it must have been about the fifth month of pregnancy; I did not see either. She continued after this with a temperature of 102°, and a pulse of 150. At the end of the sixteenth day, by means of douches, etc., the temperature was 102½°, and the pulse to 126 to 130. It was evident that the uterus was septic, and she was then sent to an infirmary. It was then a question of two steps—complete or partial removal of the uterus. The latter was determined upon since it could be done more rapidly, the girl being very weak and still profoundly anemic. I opened the cervix above and below, and removed the portion which I exhibit, the operation occupying about twelve minutes. She was placed in bed with a strip of gauze through the cervix into the cavity of the peritoneum. Her temperature subsided, pulse came down and she made practically an ideal recovery, leaving the infirmary at the end of the second week. From the size of this uterus it does not seem to me that their statements can be correct as to the time. I do not think involution could take place so rapidly.

DISCUSSION.

Dr. L. S. McMurtry: I think the case is exceedingly interesting, and I rise to endorse the procedure in every way. Dr. Cecil reported a case before the Medico-Chirurgical Society in the autumn, where the Crede method had been vigorously used and inversion occurred, but it was reduced in a few minutes. This can be done sometimes, but when several days have elapsed it cannot be replaced. Hysterectomy is the proper procedure. Leaving the cervix in this case abbreviated the operation very much. I congratulate Dr. Abell on the admirable manner in which he has conducted the case.

Dr. J. Garland Sherrill: I think Dr. Abell is to be congratulated. He spoke to me about the case while it was in progress just after he was first called, and he has conducted it as well as it was possible to do. Any effort to remove it earlier would probably have resulted fatally. Even after removal she was quite anemic.

Dr. Irvin Abell: In looking up the subject of inversion I find that Beigel in 1895 reported that inversion occurs in only one case out of 190,000 deliveries, and Playfair one out of 190,800. Cross states that out of 400 cases collected, 350 followed delivery, and 50 occurred with foreign growths in the

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uterus, the majority following parturition, and that is relatively rare. I believe three causative factors are recognized: Delivery in the upright position, traction on the cord and excessive use of the Crede method. Martin mentions a case of long standing in which he punctured the uterus in attempting to replace it, the patient dying. Dr. Thomas, of New York, has replaced several by opening the abdomen and using dilators in the cervix. He mentions one case of Emmett's that was successful, and the woman bore children afterward. In this case, on account of the septic condition, all efforts at replacement were out of the question.

PROSTATECTOMY FOR HYPERTROPHY.

DR. IRVIN ABELL: These pieces of prostate were removed from a man 70 years of age, who had suffered with symptoms of prostatic trouble for a number of years. For five or six months previous to the operation he had used the catheter continuously. Carbolic acid was used to sterilize the catheter; the attendant on one occasion forgot to wash the acid from the catheter, and the old man sustained a severe burn of the urethra; following this he had a temperature of 103° to 104°, and catheterization was exceedingly painful and difficult.

I made a suprapubic cystotomy for drainage, and his condition improving, the question of removal of the prostate came up. The hypertrophy was of the soft variety, and was removed through the perineum, through a median incision. The mass weighs one and a quarter ounces. Two of the pieces came from the left lobe, the smaller one from the right, and this little ball is the third lobe. It was just behind the internal orifice of urethra. The operation required about 22 minutes, and there was no shock and very little hemorrhage. He has progressed nicely, now being able to void without difficulty. The suprapubic opening has not yet completely closed, permitting a leakage on urination.

DISCUSSION.

DR. J. B. BULLITT: I feel that Dr. Abell is to be congratulated upon this case as much as upon the other. This is the first case reported before this Society for relief of this trouble. During the last few years there has been a surprisingly large number of these cases reported, and the results have been surprisingly good. The mortality is singularly small, and the relief of the symptoms is likewise singularly great, and the operation is justifiable in many cases and will be practiced to a much greater extent in the near future, as soon as surgeons realize the ease of the operation and the good to be derived from it. Dr. Abell was telling me about this case some time ago, and he told me that he was surprised at the ease with which it was performed. It was his first effort, and he was very much surprised to see how easily it shelled out. This is the ordinary report, but prostates vary, and some do not shell out.

DR. L. S. MCMURTRY: It just occurs to me to contribute one fact to the discussion. About a year ago I witnessed an operation of this kind. The bladder was opened by a suprapubic incision, and the prostate gouged out. It struck me as being a very bloody and unsurgical operation, and it was impossible for the results to have been so good as if such a complete, clean piece of surgery as this had been done. Contrasted with that kind of procedure, it is very instructive to hear a report of this case. I believe this operation is going to grow in favor, and the perineal section will in these cases be universally adopted.

DR. W. R. BLUE: I rise to congratulate Dr. Abell. Undoubtedly the perineal is becoming the popular route. I was in the East a few weeks ago and found all the surgeons doing the operation by that route. In 1900 I saw Mr. Fenwick do one by the suprapubic route, and Mr. Frier also did two by that route. Dr. Fuller, of New York, and Dr. Young, of Baltimore, make an

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opening through the membranous urethra and pull the prostate out through the skin wound. Of course, there is one form or kind of hypertrophied prostate which I think Wishard's operation will benefit as much as any, the kind where the median lobe forms a bar.

Dr. August Schachner: The suprapubic operation is an especially bloody one as compared with the lower operation. It is not always to say just which is the preferred route, but I think we are rapidly coming to believe that the logical route is the lower. By manipulation with a sound you can draw the prostate out through the opening. I believe from what I can learn that everything depends upon the accuracy with which you get into the capsule and stay there. If you do not, you get all tangled up. I think the perineal route is the one to select for many reasons—less hemorrhage, better drainage, more convenient, and the mortality is smaller.

Dr. J. Garland Sherrill: I think Dr. Bullitt is mistaken about there having been no cases of this kind reported before. I reported a case of removal of the prostate done for retention of urine and blood. The bladder was opened to relieve the condition and to remove the prostate. It was done by the suprapubic route, and I found it very easy, the bladder having been lifted up by means of a rubber bag in the rectum. Four or five masses like these were enucleated without any trouble at all. The method mentioned as used by Dr. Deaver would be both bloody and dangerous, and I much prefer to operate with the finger because that can do little damage.

So far as methods are concerned, this is the only one I have used, and having found it so satisfactory, should be tempted to use it again. Undoubtedly there are cases in which the suprapubic operation is to be preferred, and in others the perineal route would be better. In the case of a man with a deep perineum or a very fat man where you suspect a large middle lobe, I believe the upper route is better. I think either method can be used satisfactorily, and I would certainly prefer either to the Bottini mothod.

Dr. August Schachner: I did not report the case here, but I removed a large middle lobe by the suprapubic operation, and the amount of hemorrhage was something enormous and I had to pack the whole bladder to control it.

Dr. J. Garland Sherrill: There was some hemorrhage, but it was from the bladder wall, and had to pack the bladder to control it. I see no reason why the same hemorrhage would not have occurred if the operation had been done from below.

Dr. Irvin Abell: From the relation of these prostatic growths we must conclude that we have to deal, not only with urinary obstruction, but with circulatory obstruction as well, and any method considered must look to the relief of both.

The urinary obstruction is produced by the hypertrophy encroaching upon the urethral lumen, and when the prostatic capsule is completely filled it obstructs the venous circulation, not only of the prostate, but of the bladder as well. Consequently, a thorough removal of the obstructing mass is the proper thing to do.

There are several objections to the suprapubic route: Opening of the bladder, hemorrhage and infection. In this case I sacrificed a great part of the prostate floor, but it healed nicely and he has a good canal to-day. These growths can be gotten out through the urethra with comparative ease.

FIBROID TUMOR OF THE UTERUS—ANESTHESIA PNEUMONIA.

Dr. L. S. McMurtry: The case I report is one of mammoth fibroid tumor of the uterus, together with fibrocystic tumor of the breast. This fibroid occurred in the person of a spinster 39 years of age, and was the largest fibroid I have ever seen. It weighed 28½ pounds; filling the pelvis, it extended

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to the diaphragm. When she was in a sitting posture it rested on the patient's knees, and she had a habit of crossing her hands on top of it. She was fairly well nourished and in good condition for operation. The operation was done on the 19th of March, Dr. Sherrill kindly assisting, and was quite simple. There were no adhesions; the incision extended from the ensiform cartilage to the pubes. The abdominal wall was very thin; the tumor was easily delivered, and was found multinodular—with two large nodules undergoing calcareous degeneration. The pedicle was small. The abdominal incision was closed up, and meanwhile Dr. Grant and Dr. James Vance excised the left breast. Microscopic examination showed the mammary tumor to be a fibrous tumor with retention cysts. Every precaution was taken to insure asepsis; rubber gloves were used, and the operation completed in a short time with very little shock.

An interesting feature of the operation is the large amount of blood removed. The tumor has those large venous sinuses almost as large as the intestine and the veins of the broad ligaments were varicose. This being the case, I completed the operation by the method adhered to by Price and Bantock and used a neude. She was put to bed with a pulse of 100. The anesthetic was administered by Dr. Haynes, who has had a very large experience, and chloroform was used at first, then ether during the greater part of the time. The entire time of the operation was fifty-five minutes.

At 6 o'clock her temperature was 99°, and she had pain. On the 20th, in the morning, pulse 103, temperature 100 3-5°; at 6 o'clock, pulse 123, temperature 103 2-5°, respiration 28. On the 21st, at 8 a.m., pulse 116, temperature 101 4-5, respiration 26; 6 p.m., pulse 122, temperature 102 4-5, respiration 32. The rales in the right lung and rapid respiration showed that she had developed broncho-pneumonia, and she preceded with the most severe attack of catarrhal pneumonia that I have ever known. You could feel the fremitus through the clothing during the greater part of the attack by placing the hand on her chest. The right lung was not used for days.

On the third day the bowels moved well, and no abdominal symptoms developed. From March 25 to April 1 she was exceedingly ill; her respiration was very rapid. The right lung received no air, and the left one was partially involved. On April 1 her pulse was 142, temperature 104 1-5°, respiration 37. April 3, pulse 118, temperature 100 1-5°, respiration 26. April 4, morning, pulse 108, temperature 99°, respiration 20; at 6 o'clock, pulse 116, temperature 100 1-5°, respiration 24. On yesterday morning her pulse was 108, temperature 99°, respiration 20; at 6 o'clock, pulse 112, temperature 99 2-5°, respiration 20. To-day, 8 a.m., her pulse was 100, temperature 98 3-5°, respiration 20; at 6 p.m., pulse 106, temperature 99 1-5°, respiration 20. Resolution has proceeded rapidly, and she is now in safe convalescence.

Treatment consisted in the use of strychnia hypodermatically and normal salt solution by rectum, and all the whisky she could be induced to take. She was very averse to stimulants, and had no relish for food. She was induced to take buttermilk, and for twelve days this was all she took, with whisky. She is now taking an abundance of nourishment. Both of the wounds healed perfectly dry, and I think she is now safe.

As to this complication, it is the only instance I have ever had of anesthesia pneumonia. I think it is due to the anesthetic administered during the operation, for she went on the table in perfect health, with no chest symptoms whatever. I inquired particularly about influenza; she lived an indoor life, and was not exposed in any way, and was well nourished. Whether it was due

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to the chemical effect of the anesthetic, or to swallowing material during the operation, I do not know. But this was an anesthesia pneumonia, and not of croupous character.

She presented the typical signs I remember seeing in young children in the fatal form of capillary bronchitis. It has now been three weeks since the operation.

DISCUSSION.

DR. IRVIN ABELL: Dr. McMurtry's case illustrates the fact that we should use every means to save time while the patient is on the table. This was done in this case; had it not been done, the probabilities are that the patient being exposed longer to the causative factor would have had a severer attack of pneumonia.

DR. J. GARLAND SHERRILL: I had the pleasure of assisting Dr. McMurtry in this case. It was certainly the largest fibroid I have ever seen. As to the complication of pneumonia, she was not any more exposed than patients ordinarily are during an operation, and there was little chance for congestion of the lung from this cause. The room was warm, and the surface of the body kept warm throughout. I take it that the pneumonia was due entirely to the anesthetic, and I might mention two features acting in the production of this condition. First, the evaporation of the ether undoubtedly must produce some chilling of the surface of the lung. This occurs rapidly on the surface of the body, and I do not see why it should not occur in the lung, with a congestion of the mucous surfaces as a result. There is another feature we must take into consideration—the aspiration from the throat and mouth of fluids containing bacteria. The congestion of the mucous membrane renders the surface ready for bacterial infection, and we do have aspiration of bacteria. I think that if this patient had had a bad kidney she would have died promptly without the exact cause being known. I am still inclined to prefer chloroform to ether as an anesthetic.

RADIOGRAPH SHOWING TUBERCULOSIS OF THE KNEE.

DR. JAMES B. BULLITT: I have a radiograph here which I thought a very pretty one, showing tuberculous process of the knee. It was the case of a child 18 months of age, with a swelling of the inner aspect of the leg. The mother has the look of a tuberculous woman, and has a lack of voice which is suspicious of tuberculosis of the throat. The child was a fat, rosy infant, and in December began to develop a tumor on the inner aspect of the leg, about the lower portion of the tibia. It is not painful, and the joint is free, but fluctuating. It was brought to me a few days ago, and I took a radiograph first, and then aspirated the tumor, and it brought out pus. The joint structure does not seem to be involved.

DISCUSSION.

DR. ABELL: It is the prettiest skiagraph of the various structures that I ever saw. It illustrates the fact that the origin of the tuberculous process is very often under the cartilage rather than in the joint.

DR BUTLER: It is as pretty a skiagraph as I ever saw. The child ought to have the X-ray treatment.

Essay by Dr. J. Garland Sherrill, entitled "Cæsarean Section," was then read. (See page 1.)

DISCUSSION.

DR. L. S. MCMURTRY: I think the paper is a very thorough one and the essayist has given us the latest view of the subject. Of course, there will be a great diversity of opinion with regard to the employment of the Cæsarean section in placenta previa. The subject is one that has two sides, and there are a great many qualifications to determine it. I heard Dr. Zincke read his paper and heard the discussion before the American Gynecological Association, and it certainly has some very strong points. We all know that placenta previa treated by the ordinary method of dilatation

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or tamponing has a heavy mortality. It may be said that the Cæsarean section requires a skilled operator and hence cannot become of universal adaptation, but it may also be said that to treat placenta previa successfully by other methods requires skill of a very high order that cannot be obtained any more readily. I take it that the question can hardly be considered settled. The number of cases is small, and I do not think that obstetricians have yet settled the question. So far as I am concerned, if I were a woman and had placenta previa I would greatly prefer to take the chances of a Cæsarean section or Porro's operation than the ordinary treatment of placenta previa in the hands of obstetricians of the same degree of skill. I think the results from surgery are better than the best the other method can produce.

One or two points alluded to by Dr. Sherrill are also open to difference of opinion. I have operated in a number of cases of pregnancy complicated by large tumors. All that I have done made easy recoveries, and the operation is quite as easy as a simple hysterectomy. There are no adhesions and no difficulty in delivering the uterus.

There is just one point where I would offer a criticism of the paper, and that is that I do not think the essayist has favored the Porro operation sufficiently. Looking at the subject again from the standpoint of a personal one, if I were a woman with a contracted pelvis, I would prefer the Porro operation to a Cæsarean section, which might have to be repeated. A number of cases are reported where the operation has been successfully done several times on the same subject; but it is nevertheless a serious operation, and one that has its perils. If a woman has a pelvis that precludes delivery, I would feel that a Porro operation was due her as a protection for the future. The pregnant uterus is a very succulent organ, and exceedingly subject to septic infection. While the surgical treatment as carried out by skilled surgeons eliminates sepsis, yet it is possible under the very best technique, with a soft pregnant uterus whose placental attachment is a field for septic processes to develop, that this calamity may occur. So I believe that the Porro is the better operation; the chances for recovery are better than in the Cæsarean section.

Dr. Adolph O. Pfingst: I simply rise for information. I would like to know if any one can tell the true origin of the term "Cæsarean" section. If it is due to its claim for superiority, then there is a certain amount of appropriateness. I saw Olshausen do this operation before a class of two or three hundred men, and it certainly was a chance for a grandstand play, saving two lives at one stroke! Another point I might mention is that, Olshausen did not suture the uterus; his reason was that the contracting uterus brought the wound into apposition.

Dr. August Schachner: The essayist has given us a very interesting digest of the subject as it stands to-day, and Dr. McMurtry has made additions to it. The one feature that I would like to speak to, and I take the same stand as Dr. McMurtry, is that the Cæsarean section has hardly reached that point where it will replace the other treatment for placenta previa. If you will consider the situation he described—a case treated by a skilled obstetrician and by a skilled surgeon, both under the same conditions—I believe that the Porro operation has the better of the argument.

Another point on which I do not agree with the essayist. If I were confronted with a case of this kind, I think I would put the question to the patient as to whether there should be enforced sterility. I would like to get their wishes before I commenced to operate. I believe the Porro operation is the safest thing in the end. While the Cæsarean operation has become safe, as we use the term, yet it has a great many more risks than the Porro operation, which is relatively simpler.

Dr. J. Garland Sherrill: I thank

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the gentlemen for the discussion. As to Dr. Pfingst's question, I do not know that it has ever been decided whether the term is applied to it on account of it being a grand operation, or whether it was because Cæsar was delivered in this way, or whether it is simply a term that was given it by derivation from the Latin "case," "I tear."

Some operators have advised against suturing the uterus, as it contracts very rapidly, with a small amount of hemorrhage, still I feel safer in applying sutures, to prevent infection or any chance of hemorrhage.

I must agree with what Dr. Schachner said in regard to enforced sterility, but must differ in regard to the mortality. The Porro is more fatal than the Sanger method, and the patient has a right to decide which she will have. There are times when we cannot do a Sanger and must do a Porro.

One reason for bringing up this subject is that the attention of the profession generally has not been called to the treatment of placenta previa by this new operation, and it opens up a field where great good can be done. The child ought to have a chance for its life when it will not endanger the mother. I would recommend the Porro operation in all septic cases, as well as in cases of malignant disease which are operable.

PERINEAL SECTION.

Dr. J. Garland Sherrill: I recently had a very interesting case of a married man who had developed acute gonorrhœa. I was called to see him one morning, and found he had not passed his urine for some hours. About the middle of the pendulous portion of the urethra I found an abscess containing about two drachms of pus. I was unable to get any instrument into the bladder; I could get into the sac, but not any further. After some consideration it was finally decided to open the perineum for relief. Evidently the man had a deep stricture as well, and I thought I might tap the urethra posterior to the abscess. For several days he was left with a drain, and was flushed out twice a day. Then I inserted a catheter into the bladder, and left it there for some days. It is now about eight days after the operation, and the abscess sac is almost healed, and the perineal opening is healing very nicely. The operation was done practically without a guide, and this is my second perineal section without a guide. My experience with these cases leads me to believe that in making the incision, you should do the operation as though you were going into the bladder for stone. As long as I searched in the perineum for the urethra, I could not locate it with any certainty. This attack had lasted for about two weeks when I saw him, and he had previously been treated for stricture.

DISCUSSION.

Dr. W. R. Blue: It is an interesting case. Undoubtedly one of the glands of Littre was the seat of the abscess. I make it a rule to try to get into the bladder with a guide. I find that if you cocainize the patient you can get a filiform in. I do not like to do perineal section without a guide, for we sometimes miss the urethra. I saw a case at the City Hospital that was operated on without a guide. The patient died very promptly of peritonitis.

Dr. J. G. Sherrill: I tried cocaine and also chloroform.

Dr. Ap. M. Vance: I have done external urethrotomy many times without a guide, and always thought I would get into trouble, but I never failed to get in. The thing to do is to do your work very carefully, and know what you are going through by sight and touch. I do not think it is difficult to recognize the urethra; I do not know how many times I have done it. I did it five or six times one August at the City Hospital. Dr. Palmer went off to Philadelphia for some weeks, and bladders were bursting, and I did five or six of them without a guide. The operation is a bugbear rather than a reality.

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THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Friday, April 17, 1903, Dr. A. M. Cartledge in the Chair.

ERYTHEMA MULTIFORME FOLLOWING TYPHOID.

DR. JOHN G. CECIL: Perhaps some of the gentlemen present remember that I reported a case of skin eruption following an attack of what I took to be typhoid fever in a girl 13 years of age. To continue that report it will be necessary to briefly review the case. She was seized with fever after several weeks of indifferent health, which ran the course of ordinary typhoid. During this fever a very profuse eruption appeared first on the belly, and then spread rapidly over the entire body, running up on the neck to the hair line. This had all the appearance of ringworm, only it did not itch very much and faded out too rapidly, under medicinal treatment, and did not become so scaly. I made a provisional diagnosis of ringworm and treated it first with tincture of iodine and afterwards with white ointment of mercury. There were four distinct recurrences of this eruption. After consulting various friends of reputation among the skin doctors, I concluded with Dr. Skinner that it was a case of erythema multiforme, one of the most remarkable I have ever seen. The child made a very tedious but a good recovery, and is now out and gaining rapidly. If one had been called in to see this eruption he would have called it an ordinary case of ringworm. After watching the case I concluded I was mistaken in my diagnosis of ringworm and was driven to the diagnosis of erythema by exclusion. It was a case of unusual interest to me, and I am not yet clear as to its origin. Granting it to have been erythema, it is a question whether it was indigestion which caused it, or whether it was an unusual phenomena of typhoid. In consulting some English authorities I notice that this form is occasionally seen as a complication of typhoid, and I am disposed to rest on that hypothesis.

DISCUSSION.

DR. LOUIS FRANK: I rise to ask if the eruption in erythema would not be more diffuse, and would there be that clear area which we find in ringworm? Two or three years ago I saw a case of erythema nodosum following a very mild attack of articular rheumatism in a trained nurse. The eruption disappeared in a few days and did not recur. Dr. Koehler verified the diagnosis and treated the case.

In conjunction with this case and along the line of complieating(?) skin eruptions, I had a peculiar case last week, following a hysterectomy. It was a supravaginal amputation for fibroids, the operation being done without any difficulty and the patient doing very nicely until the fourth day, when she developed temperature and soon after a profuse eruption over the entire body. This was a livid, multiple eruption. It was a circumscribed neurotic angeiomatous edema. After about four days it disappeared and the temperature became normal and she went on to convalescence. Dr. Vance told me that he had seen a similar eruption follow the same sort of an operation. Whether it is due to removal of the uterus and the appendages I do not know, but it was unusual to me. The eruption was somewhat like urticaria. The cervix had been swabbed out with pure carbolic acid and alcohol.

CONGENITAL CATARACT.

DR. T. C. EVANS: I would like to get the opinion of the eye men on a case. On Christmas day a child supposed to be suffering from acute conjunctivitis was brought to my office, and on examination I found a congenital cataract. The question is as to the time for operation. I have looked up the literature and found there is much difference of opinion as to the time of operation. The child is now about 4 months old, and I have advised the parents that I do not think it safe to

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operate until it is over a year old. The cataract is complete in both eyes. The child has developed rapidly and is apparently in perfect physical condition. The books all quote from previous editions to the effect that children with congenital cataract are subject to convulsions, but this child has nothing of that kind. There is no history of cataract on either side, and none in the brothers or sisters on either side. This is the first child, so we cannot tell what may develop yet. It is quite common for congenital cataract to be hereditary. I would like to hear an expression of opinion as to the best time to operate.

DISCUSSION.

DR. WM. CHEATHAM: The only child a leading physician of this city ever had was born with cataract and other troubles. Dr. Knapp and Dr. Agnew both advised an early operation. It is impossible to make an examination of the field in these cases. That is one objection to operation. But they advised early operation in that case. I have never operated on any that young.

The essay by Dr. Wm. Cheatham, "Reflex Neuroses," was then read. (See page 7.)

DISCUSSION.

DR. J. M. RAY: So-called reflex diseases have always had such a mystery around them that there is doubt in my mind on the subject. Admitting that there is such a thing, I do not believe it is very common. I think Dr. Cheatham has mixed up two or three different conditions under this head in his paper. I cannot agree with him that the association of phlyctenular disease with irritation about the nose is a reflex condition. The majority of these cases occur in children associated with a lymphatic diathesis and eczema. I would not class such diseases as reflex at all, but as simply part of the general condition, the eye trouble, the nose irritation and congestion of the nasal mucous membrane being all parts of the same process. There is no question but that we find many cases of congestion of the nasal mucous membrane in which the conjunctiva of the eye participates in the congestion and hyperemia. But I think this is simply the result of the extension of the process through continuity of tissue.

Ziem has written a number of papers on this subject, and I think his explanation is that it is simply a part of the general condition, and that while we may allay the irritation by treatment, it will recur unless we treat the nose also. I do not think this is necessarily a reflex condition.

DR. A. M. CARTLEDGE: I am like the last speaker. I do not know whether I believe in reflexes or not. I am inclined to believe that after we get out of the relationsip of certain organs having the same nerve supply there is not much in reflexes. The essayist has given us the relationship between the nerves of the nose and the eye, and I can readily see how one can react on the other. But when you get beyond these, I take the position that reflex means general nervous degeneration. We do see numerous examples of organs in the body far removed from the local trouble becoming affected and relieved by the relief of the local trouble. But I believe in such cases it simply means general degeneration, and the effect of the operation on the mind of the relief of the primary condition probably accounts for the relief of the secondary reflexes. I think the field is being very much overworked.

Take the rectum and the bladder, the nose and the eye, the stomach and the heart, the gall-bladder and the heart, and several other sets, where we do get positive interruption of one set of organs from the other—these are not typical reflexes. It is simply because they have the same nerve supply.

The headaches which are so very common in cervical troubles suggest the question of reflexes. Endocervicitis as a result of laceration seems to render the patient susceptible to headaches at the base of the brain. But I am inclined to think these are like some of the quotations made by the essayist, due to degeneration, and the relief to the cervix

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is accompanied by a mental impression that affords relief to the other condition. Some cases, I grant, are puzzling. Those peculiar neuroses in the deep urethra of the male have not been accounted for. Melancholia, insomnia and other complications are common. But I am not willing to accept the doctrine of reflexes beyond the organs having the same nerve supply.

Dr. T. C. Evans: I appreciate the paper very much. I have been rather skeptical on this theory, perhaps because I have not been able to digest it properly. But I think some of the cases Dr. Cheatham cites from other authorities could be very easily explained on the hypothesis of infection extending from the nose, involving the conjunctiva and cornea.

As to phlyctenular trouble, I agree with Dr. Ray, that it is not a reflex condition, but is associated with the nasal trouble. Pathologically I believe it is considered now that phlyctenular disease indicates lowered resistance rather than acute infection. Of course the pus organisms are constantly found in the conjunctival sac, and when lowered vitality comes on these organisms penetrate the epithelial layers. So I believe it is due to a constitutional condition. There must be some reflex, because even the laity know that when a foreign body gets into the eye it will be followed by a stoppage of the nose on that side. But I think most of the corneal ulcers can be explained by the constitutional condition of the patient or infection from the nares. I doubt whether any are due to reflex trouble.

Dr. William Bailey: I do not know whether I ought to speak on this subject, but I feel to express this, that we are scarcely prepared to reject the question of reflex influences. I think a little clear thinking should be done along this line. In those cases where you have phlyctenular keratitis at the same time with nasal disturbances, it might possibly be distinct influence from the nose upon the eye, the keratitis coming up as a result of the nerve changes. I take it that we should define a reflex as an influence involving any organ, or an impression made on its terminal nerves, the influence being carried to the center and distributed to some other point where it makes such changes in the blood supply, or the nutrition of that part as to constitute a disease similar to the one that was the origin. There might primarily be an inflammatory disease in the nose and then through the nervous influences impressions made on the nutrition of the eye, and, as a result, bring about an inflammatory condition resulting in ulcers. It may be in these cases that the nerve supply alters the nutritive forces and allows the eye to break down, just as these other forms of inflammation ending in ulceration; these corneal ulcers generally occur in people below par. I think it is established that reflexes do occur, and it is such an easy way of accounting for many doubtful conditions that we should be slow to reject this slight chance of accounting for them.

The very fact that treatment of the nose produces recovery of the eye quickly shows that the relation is very close, and how else can it come other than by curing the nasal trouble and lessening the influences transmitted, allows the healthy nutrition to be restored in the eye. Inasmuch as recurrences do not occur, the impression is made upon my mind that there is a clear relation in the case of Dr. Cheatham. I doubt if they are always part of the same general infection. If so, we should cure the nose by treating the eye. But so long as the nose condition exists we have a repetition of the conditions in the eye. In cases where disturbances of digestion are reflected to the heart, that does away with the idea of reflexes. At the present time I am disposed to hold on to the question of reflexes until something better is given us.

Dr. Wm. Cheatham: I would like to correct Dr. Evans as to his pathology of phlyctenular keratitis. I do not think there are any pus organisms in it unless there has been an infection. It is a true eczema of the cornea and the

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contents of these phlyctenules are not fluid. It may become infected afterward and then you have pus organisms.

I do not see how you can have this form of trouble an extension from the lachrymal apparatus. In teething, the connection is just as close; I am sure there is a reflex action between the nose and asthma; put a little cocaine on the posterior ends of the turbinals and the relief is immediate. That could not be if there was a neuritis; the communication between the lung and the nose is no closer than between the nose and the eye.

The diagnosis in all the cases I reported was made by exclusion. All other forms of treatment had been tried and relapses had occurred. I found the condition existing in the nose and applied the chromic acid or cautery and the relief was immediate and permanent. One case has gone on for eighteen months. Of course the sensitive areas in the nose may return. I have seen a number of these cases, and all the authorities refer especially to the phlyctenular inflammation as depending upon a nasal trouble.

I was just now asking Dr. Roberts about adhesions of the prepuce to the glans penis. The conditions often seen here must be called reflex neuroses. Is not the so-called ear cough a reflex? Many such instances can be cited. It is strange to me that any one will say there are no reflex neuroses.

Dr. Wm. Bailey: I would just like to add to the discussion a report of a case I saw about 12 o'clock one night with most marked dyspnea, asthmatic in character, due to a contraction of the tube. I learned that at supper time he had eaten sour raspberries, and a drachm of ipecac relieved him instantly. I think it was purely a reflex influence.

Dr. J. M. Ray: I admit the so-called nasal reflex in hay fever.

MASTOIDITIS.

Dr. Horace H. Grant: I have seen two cases recently of quite a good deal of interest, and I report them to interest Drs. Cheatham, Ray and Evans especially. One was that of a medical student, who had been sick for about a month. Five weeks ago he developed a discharge from his left ear, the first time he had ever had any trouble of that character. It was a profuse discharge, and he was cared for by Dr. Dabney. Within two weeks time, while the discharge continued, his temperature became the typical temperature of typhoid fever. Dr. Stucky saw him and believed it was typhoid fever. His temperature went as high as 104°. After ten days it again declined to normal in the afternoon, and in the night he had a hard chill. Every morning and evening for the next six days he had a chill at nearly the same hour, these being succeeded by high temperature and sweating. During all of this time he had neither pain nor tenderness in the region of the mastoid cells, nor any delirium. He complained of feeling badly, was a little constipated and his tongue somewhat coated. I did not see him during this time, but at Dr. Dabney's request I saw him three days ago. With this history I was led to believe there was some trouble in the lateral sinus, if not in the mastoid cells. To-day I opened the mastoid and found a moderate amount of pus and a great deal of breaking down of the cells and a considerable cavity in the antrum, large enough to put in the little finger and turn it around. Quite a deep opening was made for drainage, the question coming up whether it was not better to watch the effect of opening the mastoid before exploring the sinus. The blood vessels showed no evidence of thrombosis, so I decided to drain and await results.

Dr. Dabney also left me another legacy, a woman who had been ill for nine weeks with a discharge from the ear, temperature running up as high as 101°, but no tenderness over the mastoid cells. She had pain in the region of the ear, but no chills and no evidence of sinking in of the mastoid cells, and no tenderness on pressure. Dr. Dabney had intended to operate on her, but his illness prevented, and at his sug-

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gestion I did so this morning. I found a drachm of pus in the mastoid cells.

These cases are interesting from the fact that they have puzzled Drs. Dabney and Taylor by the absence of pain and tenderness over the mastoid cells; one of them had pus and the other a lot of broken down material. One ran nine weeks and the other five. In the first reported case there was practically no pain. The woman had a great deal of pain.

Dr. J. M. Ray: It is a very interesting subject. I operated on one this afternoon. It was a case in which Dr. Grant at one time made an incision. He was a man with old trouble which developed a bad swelling and tenderness over the mastoid, and Dr. Grant opened it and drained the abscess and it healed up. He has since gone on with a discharge from his ear, and one day he got cold and this passage blocked up and he had pain. Recently he had grippe, and ever since has had an abiding pain in the mastoid. His ear began to run freely, and he had to sleep every night with a hot water bottle. He had no fever, but was very much run down. Upon examination I found the drum membrane all gone, granulation tissue filling up the middle ear and discharging a thick, cheesy material. I tried to pass a probe in to attic, but it was so very sensitive that I could not. Today I opened up the mastoid and found the antrum large and full of pus and granulation tissue. He had a large mastoid and a very thick external layer.

With reference to the case of the medical student, when he first spoke of the case it reminded me of a case I saw some years ago with the late Dr. Scott. A young lady about 15 years of age had the earache, followed by a discharge from the ear. The pain about the ear subsided, but the discharge continued. She also had a little fever that continued. I searched her ear carefully, but found no increase in the discharge, and asked Dr. Scott to see her. He had a nurse brought in, and a record of the temperature kept, and decided it was typhoid fever. This went on for two or three weeks with no pain or increase in the ear trouble or symptoms referable to the ear. She woke up one night with an intense earache. The next morning I found a bogginess behind the ear, which rapidly increased, and a sub-periosteal accumulation of pus formed. I opened up the mastoid, then she got well quickly, fever also abating quickly.

One other question comes up as to this temperature, chill, etc. I think when fever runs on that way in acute middle ear disease, with fever, sweat, etc., I am inclined to go into the mastoid right away, and do more than Dr. Grant did. I do not believe exposing the sinus is at all dangerous. I have seen two cases where operations were refused and the patients died.

Dr. William Cheatham: The first reminds me of some cases of appendicitis reported. The diagnosis is very difficult. I operated upon one of these cases a few days ago, but the diagnosis was easy. It had a long sinus leading in. In the case of the medical student the diagnosis was difficult to make.

Dr. H. Horace Grant: One word as to Dr. Ray's suggestion about opening the lateral sinus. I did not do that for two reasons: First, it seemed to me dangerous to open it in the face of the septic condition present, the danger of infection would be great. In the second place, I thought it was fair to give him a chance to get well from the steps taken, and if he did not the other operation might be done. I think the operation is not difficult, except with respect to the danger of infection of the lateral sinus. To open it up just a little posteriorly uncovers the sinus, but if you get infection in there it is quite as bad as if in the brain.

Dr. J. M. Ray: I said, expose the sinus, not open it. As a rule when it is plugged there is a laek of pulsation. By exposing it you can tell whether this has taken place or not. I have never seen sepsis follow opening of the sinus. You can often tell simply by the color of the sinus without opening it whether the circulation is good or not.

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"Alis Volat Propriis."

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EDITED BY
JOS. M. MATHEWS, M. D., LLD.
A. M. CARTLEDGE, M. D.
H. HORACE GRANT, A. M., M. D. BUSINESS EDITOR.
HENRY ENOS TULEY, A.B., M.D., ACTING EDITOR.

THE NEW ORLEANS MEETING.

The American Medical Association concluded a most successful meeting on May 8 from both a scientific and business standpoint. The House of Delegates is a hard worked body—partly because of its size—thus delaying business. The reapportionment of the State Associations on the basis of one delegate to each 1,000 members and the already decreased representation of the sections, one to each—the work should be dispatched with more ease and at less sacrifice upon the delegates; certainly not more than three hours a day should be required.

The arrangement for section work is much better than ever before. Nothing interferes with it—the orations are at night and no general sessions in the morning. In consequence of this all of the sections showed an increased attendance over previous meetings.

The election on the last morning showed the futility of trying to eliminate the political element from these meetings, but demonstrated the wisdom of removing it from the floor of a general meeting. It also demonstrated that it is more difficult for a few politicians to control the vote of the house.

On the first ballot for President the following were put in nomination: John H. Musser, 23; L. S. McMurtry, 17; T. J. Happel, 10; Henry D. Holton, 11; G. C. Savage, 8; J. H. Carstens, 3. The second ballot gave Musser 39; McMurtry, 29; Holton, 5; Carstens, 2; Happel, 2; Savage, 1. The third ballot declared Musser elected with 52 votes and McMurtry 32.

For First Vice President the following were put in nomination: Geo. F. Jenkins, Iowa; C. Lester Hall, Missouri; G. C. Savage, Tennessee; Geo. Cook, New Hampshire, with the election of Dr. Savage on the second ballot.

Dr. Isadore Dyer was chosen Second Vice President; Dr. C. Lester Hall, Third Vice President, and Dr. Geo. F. Jenkins, Fourth Vice President.

The Secretary and Treasurer were re-elected.

Because of extortionate hotel rates at Washington, Atlantic City was chosen as the next place of meeting.

Dr. Billings, the President, won the commendation of every one for his impartial and correct decisions as presiding officer. Not once was an appeal made from his decisions.

THE OBSTETRICIAN'S FEE.

So long as the practitioner is so poorly paid for the valuable services he renders a woman at the time of her confinement, the woman will be neglected, and much that could be prevented will constantly happen. The average fee for obstetrical service in small towns and villages is $10.00, this service including attendance at the confinement and one visit during the puerperium. An extra charge is sometimes made for the application of forceps when urgently needed. The patient is not seen during

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her pregnancy, and in majority of cases not reporting for treatment or counsel until the call is made to the labor.

The laborer is truly worthy of his hire, and if ever responsible service was rendered, it is during pregnancy, confinement and puerperium. The average workingman, upon wages of $6.00 a week, can easily afford to lay aside $3.00 a month during his wife's pregnancy for the payment of the physician. When service is rendered, $25.00 is a very small fee for the work that *should* be done for a woman during her pregnancy, confinement and puerperium. The responsibility incurred, the care of two lives, etc., are as great as those of the surgeon in a celiotomy, and the fees should be commensurate.

The profession is at fault, and with some unanimity of action the fees for obstetrical service could and should be raised.

Notes.

The new advertisement of the Antikamnia Chemical Co. contains an announcement of the fact that every physician is entitled to a copy of "Hill's Chart" free of charge, and that physicians who were inadvertently omitted can obtain a copy by asking for it. The excellence of Prof. Hill's work, as well as the large amount of time and labor necessary for its compilation, is manifest and every physician should have one.

Messrs. Lea Brothers & Co. have pleasure in announcing that conforming to many requests they this day issue the superb work on the Eye, Nose, Throat and Ear, edited by Drs. Posey and Wright, in two volumes, as well as in a single volume.

Volume I. will be known as Posey on the Eye, and covers completely the subject of Ophthalmology. Price, cloth, $4, net.

Volume II. will be known as Wright on the Nose, Throat and Ear. Price, cloth, $3.50, net.

The work will continue to be published in a single volume. Price, cloth, $7; leather, $8, net.

Hyperchlorhydria, a Symposium.—The June issue of the *International Medical Magazine* will be devoted to a symposium on this most important subject, than which none more important has ever been published in any American journal. More than half a dozen of the leading European specialists will contribute, among whom are:

Prof. C. A. Ewald, of Berlin.

Prof. George Hayem, of Paris.

Prof. Carl von Noorden, of Frankford.

Dr. L. Kuttner, of Berlin.

Prof. Rosenheim, of Berlin.

The selection of contributors from this side of the Atlantic has been equally happy, and the following will take part:

Prof. John C. Hemmeter, of Philadelphia, on "An Experimental and Clinical Study of the Etiology of Hyperchlorhydria."

Dr. Allen A. Jones, of Buffalo, on "The Effervescent Test for Gastric Acidity."

Dr. Boardman Reed, of Philadelphia, on "A Further Development of the Benedict Effervescent Test of Gastric Acidity."

Dr. John A. Lichty, of Pittsburg, on "The Relation Between Hyperchlorhydria and Neurasthenia."

Prof. Fenton B. Turck, of Chicago, on "Hyperchlorhydria."

Dr. A. Robin, of Newark, Del., on the "Etiology of Hyperchlorhydria."

Dr. Max Einhorn, and others.

State Board of Health.—The annual meeting of the State Board of Health of Kentucky was held on the

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22d inst., with a full attendance present. President Mathews in his report referred to the necessity for action in regard to the sanitary condition of sleeping cars and day coaches. The report of the special committee on this question was heard, after which attorneys for the Pullman Car Company and the railroads asked for a hearing, which was granted. A special committee was then appointed to draw up regulations for the disinfection of cars, to be referred to a called meeting of the Board in June for final adoption.

It was recommended that the Board refuse recognition to graduates of colleges where it could be proven that the college had cut fees from the advertised rates.

A suggestion was made that the Board amend its requirements as to make it an examining board for the examinations of applicants to practice in the State, or the Legislature be petitioned to create an examining board, said board to be composed of men in no way connected with medical colleges. To meet this emergency it was stated that from this date no member of the present Board will have any connection with a medical college.

Dr. A. P. Hauss, of New Albany, Ind., appealed from a decision of the Board that he could not reside in New Albany and practice in Louisville, the ground for the refusal being the ruling of the Indiana Board refusing residents of Kentucky a license to practice in Indiana.

Secretary McCormack in his report referred in an exhaustive manner to the epidemic of small-pox in the State, the sources of the same, the difficulty of making county courts pay the expenses of stamping out an epidemic, the use of humanized virus in the country districts. Attention was called to the pollution of water supplies in the State, and a suggestion was made that the Legislature be petitioned to pass stringent laws governing this question. A free examination of suspected water will be made by the State College.

Dr. J. M. Mathews was re-elected President for two years; Dr. J. N. Mc Cormack, Secretary for four years.

Book Reviews.

The Care of the Baby. A Manual for Mothers and Nurses, containing Practical Directions for the Management of Infancy and Childhood in Health and Disease.

By J. P. Crozer Griffith, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania; Physician to the Children's Hospital, Philadelphia. Third edition, thoroughly revised. Philadelphia, New York, London: W. B. Saunders & Co. 1903. Cloth, $1.50 net.

The importance of the subject of pediatrics as viewed from the standpoint of the layman is evidenced by the steady demands for this little book by Griffith.

It has been presented in a most attractive manner, written with the aim of supplying the mother with information needed for an intelligent care of the child, and by no means to take the place of the physician.

The chapters upon the Baby's Growth; Feeding the Baby; Sleep and the Baby's Nurses are especially interesting. The advice given throughout is sound and practical, the illustrations good and the recipes serviceable.

The book should have a wide circulation among mothers and nurses.

Tuberculosis. Recast from Lectures Delivered at Rush Medical College, in affiliation with the University of Chicago.

By Norman Bridge, A.M., M.D., Emeritus Professor of Medicine in Rush Medical College; member of the Association of American Physicians. Handsome 12mo. volume of 302 pages, illustrated. Philadelphia, New York, London: W. B. Saunders & Co. 1903. Cloth, $1.50 net.

There has been an awakening of the profession in the last few years to the importance of the prophylaxis of this dread disease, and all works upon the subject which contain even a statement of recognized facts expressed in a new way should be welcomed.

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This book considers in detail the necessity for prophylaxis and its methods, a thorough description of the bacillus tuberculosis; also chapters on Pathology, Etiology, Symptoms, Physical Signs, Diagnosis and Prognosis.

The chapters upon treatment are of great interest, especially that devoted to the Sanatoria Treatment, which has taken such a firm hold on the profession of late. Much more, however, could be said in detail of this treatment and its possibilities at home.

The Practical Medicine Series of Year Books. Volume IV, Gynecology.

Edited by Emilius C. Dudley, A.B., M.D., Professor of Gynecology, Northwestern University Medical School, and William Healy, A. B., M.D., Instructor in Gynecology, Northwestern University Medical School. March, 1903. Chicago: The Year Book Publishers. Price, $1.25.

The volume is a resume of the best practical literature of gynecology for the year ending February 1903. The principal developments in this branch have been in the line of cystoscopy, but little of moment otherwise having transpired during the year. A series of plates illustrating the steps in vaginal hysterectomy have been published which are most excellent.

Practical Points in Nursing. For Nurses in Private Practice. With an Appendix containing Rules for Feeding the Sick; Recipes for Invalid Food and Beverages; Weights and Measures; Dose List; and a full Glossary of Medical Terms and Nursing Treatment.

By Emily A. M. Stoney, late Superintendent of the Training School for Nurses, Carney Hospital, South Boston, Mass. Third edition, thoroughly revised. Handsome 12-mo. of 458 pages, fully illustrated, including 8 colored and half-tone plates. Philadelphia, New York, London: W. B. Saunders & Co. 1903. Cloth, $1.75 net.

This third revised edition contains much new material, and while thorough and progressive, still preserves its originally practical character.

The former editions having been recognized authority in the profession of nursery, being used as a text-book in many leading training schools and endorsed by eminent specialists as well as general practitioners, it is only reasonable to expect that this improved edition will meet with still more widespread popularity. Those portions which treat of emergencies and special medical cases would alone make it an indispensable possession to every nurse who anticipates private duty.

The author's ideal of a trained nurse's duties and qualifications, combined with a thorough acquaintance with the practical information set forth, cannot fail to insure to the nurse greater future success.

JOSEPHINE MCELROY.

Diseases of the Pancreas, Diseases of the Suprarenal Capsules, and Diseases of the Liver.

By Dr. L. Oser, of Vienna; Dr. E. Neusser, of Vienna; and Drs. H. Quincke ae G. Hoppe-Seyler, of Kiel. The entire volume edited, with additions, by Frederick A. Packard, M.D., late Physician to the Pennsylvania and to the Children's Hospitals, Philadelphia; and Reginald H. Fitz, M.D.: Hersey Professor of the Theory and Practice of Physic, Harvard University Medical School, Boston. Handsome octavo of 918 pages, illustrated. Philadelphia, New York, London: W. B. Saunders & Co. 1903. Cloth, $5.00 net; Half Morocco, $6.00 net.

This volume is a valuable one, embodying, as it does, the views on the physiology and pathology of the liver, pancreas and suprarenal capsule. The role of the ductless glands in the economy has long interested the profession, and a book giving the sum total of our knowledge of the subject to date is sure to prove popular.

The sad death of one of the editors of this volume, Dr. Frederick A. Packard, which occurred as the volume was going through the press, is fittingly referred to by Dr. Stengel in his Preface. Dr. Packard was well fitted to edit this department, as he was most at home in the diagnosis and treatment of these conditions. This is probably his latest literary work.

It is pleasing to note the rank which is held by the work of Mayo Robson alongside the German. The results of observation on and experimentation with the active principle of the suprarenal extract is fully dealt with.

This volume is fully up to the standard of the remainder of the series.

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Uterine and Tubal Gestation.

By Samuel Wyllis Bandler, M.D., Instructor in Gynecology, Post-Graduate Medical School, New York. Illustrated by 93 drawings. New York: Wm. Wood & Co. 1903.

There is much room for a discussion upon these subjects, so little except theory being written upon them in most text-books. In the development of the syncytium the histologists have found an interesting field for study, and much more is known of it in the past few years than heretofore. This histological structure is thoroughly described as well as the embedding development of the human ovum, the early growth of the embryo and the placental gland.

The theories in regard to the annual course of ectopic gestation are those generally accepted now, being substantiated by microscopical examination of specimens. The book should serve to more thoroughly establish belief in theories which are only partially accepted.

The Surgical Diseases of the Genito-Urinary Organs.

By E. L. Keyes, A.M., M.D., LL.D., Consulting Surgeon to the Bellevue and the Skin and Cancer Hospitals, etc., and E. L. Keyes, Jr., A.B., M.D., Ph.D., Lecturer on Genito-Urinary Surgery, New York Polyclinic Medical School, etc., etc.; with 175 illustrations in the text and ten plates. New York and London: D. Appleton & Co. 1903.

This edition is the third edition of the original work, Van Buren & Keyes' Text-book on Genito-Urinary Diseases with Syphilis, which appeared in 1867. Its first revision occurred in 1888, and this complete revision has been necessitated by the advances made in pathology and treatment. Syphilis has not been considered in this volume.

Part I. of this edition considers Diseases of the Urinary Organs, including gonorrhea; Part II., Diseases of the Genital Organs. The plates showing the various contrast stains for gonorrheal pus are very excellent ones. The Chetwood method of irrigation (Modification of Janet's method) is advocated in the treatment of acute gonorrhea. Permanganate of potash solution is advocated.

The authors' views on stricture are sound, and expressed in these words, "Never cut if you can dilate, and recognize that the patient is not cured unless he stays cured."

The chapter on Nephroptosis is up to date as far as it goes, but little being said of the relief of the condition by the corset save its bare mention.

The authors do not recommend universal circumcision, which view we heartily concur in. The methods of circumcision are given quite fully.

AMERICAN EDITION OF NOTHNAGEL'S PRACTICE.

Diseases of the Stomach.

By Dr. F. Riegel, of Giessen. Edited, with additions, by Charles G. Stockton, M.D., Professor of Medicine in the University of Buffalo. Handsome octavo volume of 835 pages, illustrated, including 6 full-page plates. Philadelphia, New York, London: W. B. Saunders & Co. 1903. Cloth, $5.00 net; Half Morocco, $6.00 net.

For years the Germans excelled in diagnostic technic in stomach diseases, and the writings of their authorities are always of interest to Americans, who in recent years have done as much original work as their neighbors across the water. In no other subject, perhaps, has there been so much of interest and service developed by these various investigations.

Besides considering the subject of gastric disorders in detail, the editor has collected the most recent views on cyclic vomiting in children; syphilis of the stomach; etiology of gastric ulcer; the blood in ulcer and cancer; diet in hyperacidity; acute dilatation of the stomach; digestion leucocytosis; benign tumors; achylia gastrica; hematemesis of hepatic cirrhosis; congenital stenosis of the pylorus and operative procedures in stomach diseases.

The work will be found to include the views of the author, Prof. Riegel, as well as those of the editor, Dr. Stockton, who is a recognized authority on the subject, the latter's comments being enclosed in brackets wherever introduced.

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LOUISVILLE MONTHLY JOURNAL

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Original Communications.

PRESIDENT'S ADDRESS.*

BY B. A. ALLAN, M.D.,

LOUISVILLE, KY.

GENTLEMEN—I take advantage of the occasion to express my appreciation of the privilege I have had of presiding over this Society for the past year and to earnestly extend my thanks for the courtesy and patience with which my efforts have been received by the members of this body. I ask you to believe me that these are no idle words, and that I shall remember both the honor and pleasure as long as I remember anything connected with medicine. While I think it is hardly worth while for me to repeat to you that which I am sure you must know as well as I, still I will take advantage of the occasion to call your attention to a few changes that have taken place under our observation in medicine during the past year. In this Society the interest and the fidelity of its members in the conduct of all its details has been fully equal to that which has characterized it in the past; in addition to that the new plan upon which the Society was organized, the publication and dissemination of its papers and discussions and the manner in which entertainment has been provided, all indicate a new era, most of which has transpired under my administration, and I think there is reason to believe that the new plan has more than satisfied the expectations of even the most critical.

The past fifteen months have been notable in medical societies and medical teachings, not only local, but national as well. The changes which have taken place in the constitution of the American Medical Association made obligatory upon us the establishment of a County Society, and although this Society was established in the face of the fact that such institutions have not been prosperous or popular in this county, its success has been maintained at no expense or loss to the individual societies of the city, and the Medico-Chirurgical Society has contributed its share to the prosperity of Jefferson County Society, and has extended its prestige and maintained its usefulness. There can be no estimate too high of the value of medical societies in professional education. What is left unfinished in college life is perfected in the societies, both local and general, and it is a recognition of this fact which has stimulated the medical profession of Kentucky to an improvement in society methods, and the profession also hails with hearty endorsement the various steps taken by the organized bodies at large for the improvement of medical teaching in its colleges.

The general organization of the American Medical Association has been followed by the appointment by that body of a special organizer, who goes from place to place in the United States with a view of perfecting State organizations and adding to the usefulness of the national body. The result has been al-

*Delivered before the Medico-Chirurgical Society, May 29, 1903.

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most a doubling of its membership and of its revenues until at the present time the American Medical Association, especially in the matter of education, is unsurpassed by any other similar institution in the world, and it bids fair in the future to stand unrivaled. The influence of all this advance has been felt in the college association as well. The State Boards of Health all over the country have taken out of the hands of college professors the examination of students applying for a degree, until at the present time there are only a few States in the North in which the diploma of any medical college is recognized without an examination, and this tendency is spreading, also, to the West and South, and even within the past week or two our own State Board has taken steps to constitute itself an examining board, and also of advancing the requirements of medical teaching in such a way as to lead us to hope for a great improvement. The methods by which all this is attained, of course, is outside the direct influence of any local society, and particularly this one, but a reflection on it leads us to remember how, out of an influence of this kind, which extends itself in every direction, great results are obtained; and though perhaps we are not working directly to an end of this kind, we recognize that our efforts still have that tendency, and even without knowing it, all these influences are aiding in furthering a good cause. The chief aim, perhaps, of all efforts in this direction, is the organization of the medical profession, first, as a national body, and, second, as organized societies contributory to this national body all over the country. Only by this organization can we hope to attain anything like uniform results for the individual, for the community, for the State and for the country. The aims of this organization would be, of course, more or less conditioned to each special community. Here at home we have some trying needs. Amongst them, perhaps a common one, is the regulation of fees; another one of our great needs is an established place where the profession can meet; another of our hopes is a recognition in the great public library now under construction; but above all, is the never-to-be-forgotten aim—the elevation of professional dignity. So long as we are composed of small cliques, so long as envy and jealousy exist in professional matters, particularly aggravated by rival medical colleges, and so long as we are out of accord because of material division of opinion, the accomplishment of that which is to be hoped for through organization is impossible.

In conclusion, I have to recommend to you, above all things, unity of action without regard to school affiliation, without regard to special ideas of practice, and perhaps even without consideration of secular divisions of practice. At any rate, a combination of all of our efforts, without jealousy or envy, is the chief aim to be accomplished by so organizing our body as to achieve the greatest good and attain the highest dignity.

CANCER OF THE RECTUM.*

BY F. W. SAMUEL, M.D.,

LOUISVILLE, KY.

The expressions and the deductions in the essay presented to you this evening for discussion are based upon the results of the operative work instituted in the last two cases of cancer that have come under my care, embracing the short period of less than two years. In my entire experience I have only seen twelve cases, and that embraces a period of nearly seventeen years and includes the last two reported cases. However, I have through the courtesy of others seen possibly twice that number in different stages of development. My individual experience, therefore, has not been a very large one as to the number seen; but of the twelve cases I have had under my own care I have

* Read before the Louisville Surgical Society.

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been able to follow them through their clinical history over a period of three to ten months; all of them when first seen by me were so far advanced as to be regarded as inoperable, and the clinical picture that was impressed upon me during the time I endeavored to relieve their distressing symptoms has forced me to the conclusion that cancer of the rectum is the most deplorable and loathsome disease with which I have ever come in contact. Those that were afflicted, in many instances the most beloved in a charming circle of relatives and friends, soon become relegated to the class of morphine habitues, and from their loathsome condition by choice the hermits of the family; in fact, a melancholy state is plainly noticeable in many, in the later stages of the disease.

In the last decade such radical methods as these have given great impetus to surgical endeavor to relieve these cases, and the improved technic has begun to show great success in this field. However, there is no field open to the surgeon that promises greater rewards in the improvement of early diagnosis and operative technic.

The meager results of operative measures that have been instituted in the past are to my mind clearly due to the fact that such operations have been done at too late a period in the history of the disease to be complete and the route selected to reach the field of the disease too limited in the space it afforded to insure anything like a radical procedure. This fact has led to the more modern operative technic, such as the transacral operations after the method of Kraske, and in high growths the abdominal route as done by Queen, Abbe and others.

The operations that have been done at a late period in the case are necessarily incomplete in most cases, and as far as my experience goes the indication for operation has recurred, and it is this fact that has made cancer of the rectum the *nolle me tangere* of surgeons in the past.

Possibly the first symptom that we are called upon to give relief for is that of stenosis, which, as the infiltration progresses, becomes one of obstruction to the easy passage of the feces, resulting in tenesmus that is painful, and needing constant relief. This is soon followed by foul-smelling discharges; sooner or later the perirectal structure becomes involved and breaking down from the subsequent infection; abscesses form leading to fistulous openings about the buttocks. This horrible state only goes to prove that when cancer of the rectum has reached the border line of operable to that of inoperable there is nothing that we possess that will stay the disease.

In the last decade, however, great progress has been made in a surgical endeavor to relieve these cases and the improved surgical measures in this field have begun to show success, but there is no field open to the surgeon which promises greater rewards for good, honest labor and investigation, and no other open to greater improvement in skill and technic.

Cancer of the rectum occurs in any part of the rectum, but most frequently from one to two and a half inches from the anus; histologically it is most frequently met with as an adeno-carcinoma, i. e., a glandular carcinoma with cylindrical cells, proliferation of the glandular ducts give rise early to an adenoma, and by an atypical growth of the epithelial elements becomes a corcinoma. Destructive adenomas here have the same clinical course as do genuine carcinomas; in addition to this class of growths there have been reported scirrhous and colloid cancer. Cancer here proceeds along the same lines that cancer does elsewhere, possibly in most cases a little more rapidly, in that soon in its history infiltration begins and with rapid lymphatic involvement, making many cases early in their history inoperable. It is not far here to see the reason for the rapid cell activity, due in the first place to the function of the part, in that it is the

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route for offensive fecal discharges passing over the surface of the growth, laden with infective material, which by traumatism soon become engrafted upon the growth, mixed infection. This causes ulceration early in its course, and marks the beginning of a cachexia. The clinical course of cancer of the rectum is characterized in its early stages by an insidiousness that is notable, in fact, there are no symptom or symptoms that can by any means be considered even fairly constant, it being the rule that the higher up in the rectum the growth occurs the greater the paucity of symptoms in the early stages. My own experience compels me to regard as one of the early symptoms a fullness in the rectum, accompanied by a mucus discharge, noticed by the patient as a moisture at the anus, occasionally a slight amount of blood, amounting to a drop or two, or a slight mass of mucus tinged as it were with blood. Many cases, however, in their incipiency, are so devoid of symptoms that stenosis is the first sign that forces the patient to seek relief, however, in consequence of early infective processes determining ulceration, discharges of pus and blood may precede any marked obstructive symptoms. In my experience I have been impressed with the fact that pain as a marked factor is present only in the later stages of the disease, that when pain is distressing it is the result of an increasing stenosis and extensive infiltration. Exception to this will be noted whenever the growth begins very close to the anus and early involves the anus or the sphincter, or where it begins at the verge of the anus as an epithelioma.

The prognosis in cancer of the rectum is extremely gloomy, different reporters of cases fixing the limit of life from one to two years. In dealing with this subject, the greatest emphasis is to be placed upon the importance of the early recognition of malignant changes that occur in the rectum and lower bowel, since in the treatment of cancer little is to be hoped for by surgical measures unless taken in its early stages, and at the present time nothing is to be hoped for except from prompt surgical intervention. I would define the early stage as the time before the disease has extensively infiltrated the rectal wall, at least before the perirectal structures are involved. Therefore, in the diagnosis of the cases we cannot too strongly urge the necessity for an examination of all irritations referred to the rectum.

The treatment of cancer of the rectum from a clinical standpoint calls for consideration under palliative and radical treatment. I shall, in discussing the subject, confine my remarks to what I regard as operable cases, and the surgical methods that I have concluded from my limited experience, hold out to the patient the best results. This consists in doing a preliminary colostomy to be converted at a later time into an artificial anus—the method of Kraske.

Operable cases of cancer of the rectum coming within the limits of surgical cure are cases where the obstruction is not marked and the infiltration has not progressed beyond the rectal walls. When perirectal structures have become involved, such are plainly inoperable, and are to be eliminated from the discussion.

The operative measures to be instituted in the early stages of cancer will depend upon the location of the growth. All growths, with the exception of those at the verge of the anus, which are virtually an external involvement of the anus, require such procedures as excision of the cancer and partial excision of the rectum through the perineum or such room as can be obtained in front of the coccyx. All growths that are located well within the rectum will demand a method that will give more room in order that as much of the rectum as needs it may be removed, and in the cases where lymph nodes are involved, they, too, can be seen and excised.

I believe that the greatest advance

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in the cure of this dreadful malady will in the future be based upon the fact that operators will, in the majority of cases, entirely obliterate all of the bowel below the site of the excised bowel, and abandon the idea of establishing the continuity of the rectum by bringing down the upper part of the gut and suturing it to the intact sphincter. I regard the following steps as essential in the ultimate success of the case if we expect to lower our mortality from recurrence.

That an artificial anus be made or anticipated by doing a preliminary colostomy in preference to the more radical operation. By doing this a decided advantage will be gained by diverting the flow of feces from the cancerous area, especially in beginning ulceration, thereby allowing better disinfection by frequent intermittent irrigation, which in my experience improves the patient's condition.

In cases where the growth is situated high up in the rectum I would now be influenced by the late teaching of Quenu, Abbe and others and select the abdominal route, extending the usefulness of the operative procedure in that it could be made more radical in attacking lymphatic involvement, and the end of the bowel, if possible, be brought out at the time of the operation, or an artificial anus established at once. In obliterating the distal part of the gut, we get rid of the danger of infection by the offensive discharges and the incompleteness of the operation. The disposition of the gut above the site of the excision has always been a difficult question in the transacral methods of Kraske, but in a preliminary colostomy fecal defilement is gotten rid of, and the gut fixed as high up in the sacral cut as possible. I have had no experience with the combined abdominal and sacral route, but the results of Abbe and Quenu give us great encouragement. Writers, in discussing the excision as far as possible of all that part of the rectum below the growth, lay great stress upon the fact that a large percentage of the cases that are referred to them are in the late period, and are inoperable for the reason that they have been overlooked. From a clinical standpoint age should not have any bearing in this class of cases, for many observers have placed upon record cases at 30 to 35 years of age.

The two cases referred to are briefly as follows: A male, white, a farmer, 44 years of age, one of eight children; father died at 48 of tuberculosis; mother living, age 66. Until two years ago, previous health excellent. At this time he had a slight irritation at the anus which increased until he complained of what he called neuralgia. His real trouble, however, dates back about seven months from the time of the operation. At this time he began to suffer with tenesmus, followed by bloody mucus, without relief, and fre quently a diarrhea.

The second case was operated upon seventeen months ago, age 38, of ex cellent health previous to the beginning of his trouble; father and mother both living, both over 60. When first seen I got a history that he had been passing bloody mucus for about four months, followed by pain, which at times was quite severe. In the first case an ocular inspection of the growth showed it as a distinct tumor, hard to the touch, bleeding upon being irritated, but wall of the bowel did not seem to be greatly involved. It was located upon the anterior and lateral wall of the rectum. At the operation the wall of the bowel was considerably infiltrated, and was slightly adherent to the bladder in front. Distance of growth from the anus, three and a half inches. In the second case the mass was fungus-like, hard to a probe, and in circumference was the size of a dollar, located upon the posterior and right lateral walls. It was with difficulty that I could touch the growth with my finger, pulling the rectal wall down with a tenaculum, the patient under chloroform. In neither case was there any part of the growth removed for a

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preliminary microscopical examination. Section after removal, however, showed them to be carcinoma, and the case of Dowell, age 44, a typical adeno carcinoma; both cases recovered, one quite rapidly, the other after a hard time, as the wound became infected. His recovery, after two months, seems good; he has gone nearly fourteen months now without any return. In the other case it has been nearly twenty months since he was operated. I have not heard from him in a year.

DISCUSSION.

DR. JOSEPH M. MATHEWS: It is an interesting paper, as any paper relating to the surgical treatment of malignant growths is always interesting, from the fact that so little good is derived from any operation for a condition of the kind that has existed for any length of time. I have long taken the position that, except in just such cases as Dr. Samuels described, the radical operation for cancer of the rectum is unjustifiable. Since a number of operations have been since devised, this opinion might be changed to a certain extent.

As regards the symptoms, I quite agree with Dr. Samuels. Strange to say, there are very few symptoms in its incipiency. I have seen these cases generally after stenosis has taken place, and that was the symptom for which I was consulted; the patient complained of constipation and the introduction of the finger revealed the growth.

As to the length of time a person may be affected with cancer of the rectum before death, I must differ somewhat with the essayist and with some of my friends. I had a case in Louisville that was seen by a number of surgeons in which the period from the time I began to treat him until his death was eight years. I am satisfied that some cases of cancer of the rectum exist for that length of time and that they are not always fatal in from two to four years. As far as the age of the patient is concerned, I saw a young lady die of cancer of the rectum at 17. I saw a boy die of cancer of the rectum at 12 years. The majority of my cases have been under the age of 65 years. So far as age playing so important a part, I do not believe it necessary to consider it to the extent that some do. Dr. Samuels says he has observed twelve cases in seventeen years. I have observed a great many more than that; there is scarcely a time when I do not have a case under treatment. I have two cases at this time.

I take it that this discussion is not a discussion of the merits of the paper, but a discussion of the subject of cancer of the rectum. As to the necessity of operation after observation, taking it for granted this observation occurs only after the condition has existed for some length of time, such cases are, in my opinion, inoperable. I say this with all due respect to the men who differ from me. I read a paper ten years ago before the American Medical Association in which I tried to make that point. If cancer of the rectum has existed for one year, or for a sufficient length of time to take in the entire lumen of the gut, I am satisfied that such infiltration has taken place and the lymphatic system so involved as to render it inoperable. It is true you can excise the rectum, but it is not true that you can cure the disease. If men would only wait three or four years before reporting these cases, then we might believe that the operation is successful, but they report them within a year, or possibly within two years. I have reported one case six years after operation, and another eight years, but it is a question whether it has not recurred somewhere else even after this.

The location often determines the operation. The rectum is a favorite site for cancer, next to the mammary gland probably the most favorable site. Sometimes the upper rectum is involved and sometimes the lower. The sigmoid flexure is a favorite seat, and the doctor has reported a case higher up in the colon.

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With regard to operative treatment, I quite concur with what was said by the essayist, if you can see it in its incipiency. But even before the operative steps, I would be inclined to try other measures. When stenosis has occurred, there is only one thing to do outside of the radical operation, and that is to relieve the stenosis. Consequently there are things we can do aside from the radical operation that will accomplish about as much. We may do a proctotomy, for instance, a cutting through the stricture or a dilatation to the breaking point. In preference to that, some have thought it wise to do a colostomy, but this cannot be anything more than palliative. It gives a great deal of ease to the patient while living. Along with this I would make them opium habitues, that they may be more comfortable and enjoy life until they die, and I think opium is the best of all the narcotics for that purpose. Therefore, I think a permanent colostomy is advisable only under certain circumstances. As to temporary colostomy, there is divergence of opinion. I do not think colostomy was essential in Dr. Samuel's case, from the fact that the trouble had not gone so far that a radical operation could not have been done; it is more difficult to close a colostomy than to make a colostomy.

I must differ with Dr. Samuels in one regard. He said he preferred the Kraske operation because we could not do this operation by the circular method. Some eight years ago I read a paper before the American Medical Association upon this subject, stating that the entire rectum could be removed by the circular method, not sacrificing the spine. Dr. Tiffany and Dr. Senn objected to the position, but afterward Dr. Senn told me he had practiced this method and never intended doing the Kraske again, and at Denver he read a paper on that subject. The Kraske operation is not an ideal one. It has been modified by fourteen men, mostly Europeons, and by Dr. Walker, of Detroit, and Dr. Keen, of Philadelphia. If it had been an ideal operation, fourteen able surgeons would not have modified it. I am certain that Dr. Walker has improved upon it; instead of sacrificing the spine, he replaces the bone after the operation. Keen obliterates the entire rectum and relies upon a colostomy. The secretions going on all the time are constantly oozing after a colostomy, and this makes it very ugly.

To Dr. Murphy, of Chicago, and Dr. Earle, of Baltimore, we are indebted for the revival of the vaginal route for this operation in women. There is no question but that this is the best. The entire rectum can be fully exposed by making a transverse incision and laying back the flaps. The advantage in this operation in women is very great; no bone is sacrificed and the sphincter muscle is saved. I am satisfied this will come to be regarded as the ideal operation in women.

The abdominal route is preferable for many reasons. After opening the abdomen the upper rectum and sigmoid flexure can be so easily handled and anastomosis made; you do not sacrifice the spine or interfere with the sphincter muscle; and sepsis is avoided and we overcome one of the objections to the Kraske operation, viz., the hemorrhage. It is the simplest method known, to remove it through the abdomen.

It is a question whether the statistics will be better than they have been in the past, because these cases do not come to us in their incipiency and we find conditions which we cannot rectify. It is a question whether the operation is justifiable by any route. All of these operations are major operations in surgery, and if we are not going to do them any good, the operation should not be done. I know that quite a number have reported successes after operation by the various routes, but they have reported their cases too soon. Dr. Samuel has under observation only one of his cases. The other he has lost sight of. Not sufficient time has

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elapsed yet to say whether that one is cured or not. It will recur insidiously somewhere, and the man will yet die of cancer within the next two or three years perhaps. There is no denying the fact that there are better operations to-day than have ever been attempted before, and all operators agree that it is not so difficult to operate as formerly. Even Mr. Allingham so hesitated about doing an operation for cancer of the rectum, and he had as many rectal cases as any man living.

I am still of the opinion that there are but few cases of cancer of the rectum, as seen by the surgeon, that are operable.

Dr. J. G. Sherrill: I have enjoyed the paper and Dr. Mathews' remarks very much. It is true that we see the cases of cancer of the intestines at a late day and sometimes we fail to make a correct diagnosis. In cancer of the rectum they have a better chance than with cancer higher up. I do not believe it is claimed by the majority of operators that radical operations of cancer of the rectum are curative. It cannot be shown that in the majority of cases there is no recurrence after operation by any method. It generally recurs in a short time and it is a question in all cases of cancer whether a cure is to be expected. But these cases of rectal cancer are such that we can offer something to the patient besides the cure. I believe operation gives them a respite for a time and perhaps prolongs life. But we must take into consideration the fact that in any operation for cancer we may be simply spreading the disease and causing a more rapid growth. I must incline to Kelsey's view, to do an extirpation when we can and a colostomy when we must. Some cases come to us when we can only palliate by making a fistula in the inguinal region, an operation much less dangerous than it was formerly. The higher up in the scale of life these patients are the more enjoyment they can get from life. A fistula in the groin of a hard-working man will cause great trouble, but a man of leisure who can care for it properly will get much comfort from it.

I have done but one Kraske and that was done for syphilitic stricture of the rectum. Diagnosis of the cause of the stricture was not made before its removal and the operation was done with more ease than was anticipated. The patient had almost complete obstruction of the bowel before operation, but made a nice recovery. I intended to bring her here to-night. I was able to get the rectum down to the anus after removing six inches and obtained good action of the sphincter. My experience with that case shows that a similar result could be obtained in a cancer case.

With regard to the question of the Kraske being an ideal operation, it might be said that very few operations are. The fact that fourteen men have modified it is nothing against it.

I question Dr. Mathews' statement as to the ease with which the operation can be done through the abdomen. Anastomosis of the colon to the lower part of the rectum is a difficult procedure. I have seen cases where the rectum was wounded by accident and it was very difficult to close. I would prefer to attempt some for of operation for extirpation from below, a Kraske or some modification.

Dr. A. M. Cartledge: These cases are divided into two classes, the operable and the inoperable. We all appreciate the wisdom of Dr. Mathews when it comes to diseases of the rectum, but I have thought him a little too conservative about cancer of the rectum. I believe more of the cases of carcinoma of the rectum are operable than are generally thought to be. I believe that cancer of the rectum, while quite as loathsome as the essayist pictured it, is still the best place in the body where cancer can occur, so far as recurrence after operation is concerned. I have a right to this opinion, because I operate on cancer in about all the places where it occurs. As between cancer of the rectum and cancer even

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of the breast, I would prefer (if it is an operable case) cancer of the rectum to any other situation, so far as its recurrence is concerned. I have come to the conclusion that cancer anywhere in the alimentary canal is about the most favorable site, if there is any favorable site. I am also convinced that Dr. Matthews' statement about its extreme chronicity is quite correct. It corresponds with the great chronicity of cancer elsewhere in the alimentary canal. As a rule, they give a history of indigestion for years before stenosis occurs, and it is reasonable to suppose this a part of the disease.

My experience has not been very large, and I have seen few cases of cancer of the rectum. I have, unfortunately, seen several in which operation was out of the question, when invasion of the surrounding structures forbade any attempt at removal.

I want to say that I was very much interested in the remarks of Dr. Mathews, as well as in the essay. Some of my experiences bear out his claim that as many of these cases would live by the conservative operation as long as by the radical. Last year I knew a man to die from whom I had removed the rectum by the Kraske operation about seven years ago. I had been holding that case up, and held it over Dr. Mathews, and showed him before the Society four years afterward. He died of malignant disease of the rectum after seven years, and I thought he had been perfectly cured. That was one of the earliest Kraskies performed here. I have two other cases living in which the growth was high up. In one of these it had recurred three times, and now she seems to be perfectly well. Her husband tells me she is in the finest of health. That was a circular excision of about three inches.

Where the case is operable, I believe the operation should be an attempt at removal. There is so little to be hoped for that colostomy has a place in palliation and giving comfort to the patient, but I would just about as soon die as live with a colostomy. If there is any doubt, I think I should lean to the radical operation in preference to the miserable compromise that prolongs the patient's miserable life in a very miserable way. I would be in favor of taking the risk of the radical operation where it was not obviously inoperable, and would lean toward extirpation. In many of these cases the prognosis is very good.

Dr. Louis Frank: We are all very much interested in cancer, no matter where it occurs, for it is one of the least amenable to surgical treatment when we see it. Dr. Cartledge has expressed some opinions which are confirmed by other observers along this line of radical operation. In looking over the subject, I find that Cripps reports thirty-seven cases, in seven of whom there has been no recurrence after three years, many going on for a longer time. A number of these cases had been operated on for from two to four times for recurrences. This is certainly a very high per cent. of recoveries in cancer of this or any other region, aside from the external forms. Other reports, Czerne's for instance, also give a very high per cent., something like six out of thirty-six. I believe, however, that these men had the opportunity of seeing these cases earlier than the general run of surgeons do, just as I believe Dr. Mathews might see a case of cancer of rectum earlier than the general surgeon, because people are in the habit of consulting a specialist in this line for the least trouble in this region.

Taking all things together, I believe I erred a moment ago with reference to what Dr. Bullitt said. The per cent. of recoveries is remarkably high, as high possibly as in cancer of the breast. I cannot agree with Dr. Mathews that cancer occurs in the rectum with as much frequency as in any other situation. Nor do I agree with Dr. Cartledge that cancer of the pylorus can go on so long before discovery. I believe in this class of cases that we have our

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ulcers and other conditions which antedate cancer itself. I believe also that these cases of cancer of the rectum existent for a long time possibly began low down as the flat-cell variety and not the cylindrical form. I think the latter are much more rapid than the flat or pavement cell variety, which may run on for years.

Referring to the operative treatment, I agree with Dr. Cartledge that if the case is operable at all, the radical operation should be attempted. I believe this is true of cancer in any region. We make the patients more comfortable and possibly prolong their lives. If there is any recurrence, they are not in any worse position, and if you then choose to do a colostomy, it can be done, but that colostomy is of any value in making them more comfortable I doubt. I agree with Dr. Sherrill, that these patients can be rendered more comfortable. If we are going to make opium fiends of them, even then these patients can be relieved of many of the painful symptoms if the colostomy is done. We can certainly in this way keep the lower end of the bowel clean.

I further agree with Dr. Sherrill, that the operation through the abdomen is not so easy as one might believe. To those of us who do abdominal work the difficulties are plain. I can see how a combination of the abdominal route and that from below might lend ease to the operation, but I do not believe we can make anastomoses through the abdomen with any ease, especially if they are to be made low down. I think it is a most difficult procedure.

So, also, the operation from below has its drawbacks. It is not easy, and is not devoid of danger. While these operations are rather formidable, I do not believe hemorrhage is greatly to be feared. I think sepsis is the most dangerous factor with which we have to deal.

Dr. J. B. Bullitt: I desire to say that I think Drs. Cartledge and Frank are right in saying that a larger rather than a smaller number of cases should be operated upon, not that a radical cure is to be hoped for, but that some good may be accomplished.

With regard to the X-ray, I believe it is a problem, so far as deep-seated carcinoma is concerned, which may be dismissed at the present time. While it is efficacious in superficial conditions, it is problematical in deep-seated cases.

I only desire to say a word about the technique in these cases. First, I want to call attention to the fact that a colostomy is not necessarily so disagreeable. At the present time it is possible to so make these artificial openings as to keep them under control so that the patient is not so very much wore off than a man with the anus in its proper place. If the carcinoma is within the internal sphincter, but low down, I think Murphy's is the operation of choice. Murphy states that it can be dealt with most satisfactorily, and he has extended this principle to the male by splitting the perineum forward. When the growth is high up, I give the preference before the Kraske, as the simplest and most effective, to the combined external and internal abdominal method. As perfected by Mayo, the lower portion of the sigmoid is closed as well as the rectum, the enucleation taking place by two pairs of hands, one working within and the other without the abdomen. The whole rectum is resected in this way. As a final step, the lower end of the sigmoid is brought out through the muscles and an artificial anus made. In an operation of this kind, even if recurrence does take place, the patient's condition is much improved. If the operation terminates fatally, it is something to be desired rather than to be deplored.

Dr. H. H. Grant: I think when we come to the subject of treatment of a condition of this kind, we should consider what we would do if we met a case in its different stages. Where cancer presents itself at the lower portion of the rectum, and can be removed from below, we are all agreed that this

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is the proper step to be taken. Where it is higher up and can be approached by the method suggested by Abby and Murphy, as Dr. Bullitt has just described, the abdomen should be opened and the growth reached in this way, the diseased portion removed and an artificial anus made. The lower portion of the rectum being removed, even if recurrence takes place, it is just the same as if it had recurred in any other part of the body, there is no organ now involved. The tendency to recurrence is greatly diminished by the removal of these irritating discharges, and the period of comfort is much greater, even if recurrence takes place.

I may say that in the management of cancer of the rectum, it has seemed to me the proper plan to remove by the circular method those that are low down. I would advise that cancer higher up be approached by the abdominal method, combined with a resection from below, with a removal of the coccyx by the Kraske method if necessary.

Where there is cachexia, and operation is not indicated, it is proper to do a colostomy and divert the secretions from the irritated surfaces. My experience with this operation has been limited to one case, though I have seen the operation a number of times. I did this operation a year and a half ago for a malignant growth that I considered would destroy life within six months. She has improved very much and gained 40 pounds; she has received a great deal of comfort from the colostomy, and her general health seems perfect, though the growth remains, as she will not submit to its removal. She might have lived just as long if the growth had been curetted away, but she has gone along well with the cocostomy and has good control of the feces, and this seems to be the preferable procedure.

I am of the opinion already expressed that cancer of the rectum should be attacked whenever there is any prospect of removal, and where this cannot be done the feces should be diverted through an artificial anus.

Dr. F. W. Samuels: I have enjoyed the discussion very much and learned a good deal from it, especially with regard to its chronicity. That has not been my experience, however. I have sought the history of these cases from the individuals themselves and know of one lasting over three years.

The point I wanted to make in the paper was that we should abandon the rectum so far as the re-establishment of its continuity is concerned. Though in a sense disagreeable, an artificial anus can be made a very comfortable condition. In both my patients they had very little difficulty in getting rid of the feces and were pleased with the situation. I take it that individual cases would arise where they would feel this to be a very loathsome condition.

In regard to the Kraske method, it was not a good method and I did not follow it, but the modifications of it. He took off a portion of the sacrum, and this gave rise to trouble with the bladder and other organs. The method of making a flap operation and preserving the bone has very little to recommend it. It can be obviated by taking off the periostium very high up. There is very little bleeding in this.

"X-RAYS" — THEIR ACTION UPON THE PHYSICAL ORGANIZATION.

BY JACOB GLAHN, M.D.,
OWENSBORO, KY.

Physical life is a chemical action of resolution—describing a physiological circle; due to the molecule, through its properties; which are: dynamic or explosive action, electricity, magnetism, heat, light, motion, etc.

This is a law.

Physicians and scientists have to deal mainly with the composition and adjustment of the physical organization.

We have to study the abnormal conditions occurring or existing; but to do

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this, we must have a working understanding of the composition and functions of a normal living cell, in general; and eventually of its special function pertaining to a specific organ, in particular.

Grasping the foregoing proposition, we have to untangle and analyze the nervous system in general, and begin to subdivide it into the cerebro-spinal nervous system on the one side and the great sympathetic or organic nervous system on the other.

When we have arrived at a plain, good understanding of both aforenamed divisions and their respective offices, then will we be ready to observe the chemical and physiological changes, which take place in the cells, through their instrumentality.

Every change or movement in a cell takes place through the free action or play of all the properties of the molecule.

Dynamic or explosive action, electricity, magnetism, heat, light, motion, etc., are not imaginary phenomena, but realities, they act upon a physical substance, the molecule.

All phenomena must express themselves through physical substances, the molecules.

The molecule primarily is, as we know, an ethereal or gaseous substance, condensing itself, according to physical law, into liquid, semi-liquid, solid and crystallized forms, or eventually into living cells.

This is the chemical action of resolution; it is a law.

These forms are all represented in the physical organization. As the properties of the molecule are never lost, we will find them in every substance named in their pristine vigor.

If you act upon one of said properties, you draw all the other properties of the molecule into sympathy; and for this reason a basic change must take place in the substance or structure acted upon, and as we deal in our work with living cells, pathological conditions, we must not forget this one fact, that the physical organization is adjusted to "normal" by physical law.

Abnormal conditions must give way and do give way to molecular disturbances.

You can then perceive how, say, electricity or light in any form act upon pathological conditions — the cells, through the properties of the molecule; we all know a cell is composed of molecules.

In the X-ray treatment we have to deal directly with two properties of the molecule, viz., electricity and light. There is one more factor at work during the procedure of X-ray applications, and this factor, which is a cardinal one, is, "suggestion," either through the operator or by the patient himself through auto-suggestion. X-ray operators know this statement is valid.

The patient to undergo X-ray treatment is informed and by actual demonstration shown the *modus operandi*— what is to be expected of this mode of treatment in no vacillating tone.

The patient, if ready to take treatment, is placed in a very comfortable, relaxed position, and of course this, with the novel means employed, put him in a very receptive frame of mind.

Now you all know this to be the ideal state for mental suggestions, and how these suggestions affect general and local conditions you all are aware; but for the benefit of those who do not know I will quote from Herbert Spencer's First Principles: "An impression crushes or fractures matter; this holds good in the physical organization."

If you will study cause to effect or effect to cause you will enlighten yourself on many obscure points in physiology, and that this harmonizing of facts has not been done by our great institutions of learning before is deplorable.

Life is a serious reality, and it seems to me that our academic teachers, who ought to be alive and unprejudiced, are really asleep, and the so-called dreamers are really awake and alive.

By paying more attention to the individuality of the molecule, which through

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physical law enters into the chemistry of life as a chemical action of resolution, we will be able to judge the normal from the abnormal, and by understanding these alluded-to points we will be able to choose the proper means, thereby moving medicine into the scientific column.

SOME EXPERIENCES WITH THE X-RAY AS A THERAPEUTIC AGENT.—REPORT OF THE CURE OF A CASE OF ALVEOLAR MELANOTIC SARCOMA.

EDWIN WALKER, M.D., PH.D.,
EVANSVILLE, IND.

To Finsen belongs the credit of first studying in a scientific manner the therapeutic action of light. His remarkable results and earnest work have opened up a most promising field. The discovery of the Roentgen rays, and the scientific study of these, with the Becquerel and violet rays, have further stimulated thought and research.

We now know that the spectrum we see is only about one-eighth of the real one, and that in the dark field there are numerous other rays which possess remarkable chemical and photographic reaction. What effect these will have in the cure of disease none can imagine, but certainly the effect of the Roentgen ray in some hitherto incurable maladies gives reason for great hope.

It is not my purpose to go into the general discussion of the treatment of cancer by the X-rays. Many interesting articles on photo-therapy have been published in our recent literature, but the whole work is so new that we can only glean from them the most general principles. It would be hardly profitable to review them at this time.

I will give a brief outline of my own observations in the effects of X-rays on malignant disease.

In the fall of 1901 I was consulted by a physician who was suffering with a post-peritoneal malignant growth. At his request we took a skiagraph which required a twenty-minute exposure. He returned a few days later, saying he felt much better and that he believed the growth was smaller. Our examinations did not confirm this observation, but at his request six or seven applications were made at intervals of a week, and for a while he thought he was much better. The disease, however, advanced to a fatal termination.

In this case my confidence in the therapeutic value of the ray was so little that I did not pursue the treatment with any enthusiasm; but as I look back to it now, after further experience, I really believe that it did do some good, and that a more vigorous treatment might have yielded better results.

The case which I desire especially to report was so remarkable in its course and termination as to be for me an epoch in my professional life. No previous experience has produced so profound an impression. To see a rapid-growing sarcoma heal in a short time under any treatment is truly extraordinary. Such patients are doomed by any known application of remedies. Here was a man grasped from certain death before my very eyes. Can you wonder at the deep impression made?

The fortunate subject of this sketch, was Jacob Saalwechter, of Wadesville, Ind. He was 31 years of age, and a farmer. He came to me February 20, 1902. On the right cheek, just in front of the ear, was a black tumor protruding from the surface, one and a half inches in diameter. There were no enlargement of the glands in the neck. Under cocaine anesthesia, the growth was excised well out into healthy tissue. The wound was united with silkworm-gut suture. It never healed.

Evidences of return could be seen in two weeks, small black spots appearing about its edges, and about this time an enlargement appeared under the angle

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of the jaw, which grew with great rapidity.

On March 22, under general anesthesia, I made a second operation, excising the old wound widely. The incision was continued to the neck, and I removed the tumor, which had extended deep down between the vessels to the vertebra. The sterno-cleido-mastoid muscle was infiltrated for more than an inch. The diseased portion was thoroughly excised. At various points in the bottom of the wound black places could be seen. These were curetted, only to reveal the greater depth of the infiltration. The operation had lasted nearly an hour, when I concluded the complete removal was impossible. The wound was packed with gauze. There was no infection, still it was soon evident that the morbid process was again advancing. The wound showed no disposition to heal, and the surrounding tissues were rapidly infiltrated.

On May 1, as a last resort, it was decided to try the X-ray. It was really a forlorn hope, for it seemed almost impossible to favorably affect a mass which was now hard and extended to great depth. The gaping wound was two inches deep, covered with sluggish granulations, and the sides infiltrated, involving almost the entire neck on that side.

Considering the gravity of the case, it was decided to push the treatment, even at the risk of causing some painful reaction, the danger of a burn having been fully explained to the patient.

The current was generated by a static electrical machine. The tube was a "Gold Medal," No. 3572. It was high most of the time.

At first the tube was placed six inches from the patient, but later it was brought as near as three inches. The shoulder and face were protected by a lead mask. The first seance was ten minutes, but the time was increased until twenty, and later thirty minutes. A few applications were made on alternate days, and after that were given daily. Occasionally the reaction was uncomfortably severe, and the treatment had to be suspended for a few days. At no time was there anything approaching a burn, nor was there any serious discomfort.

No black spots appeared after the first exposure, and after the third there was apparent improvement, and the skin had entirely cicatrized in two weeks. The infiltration gradually faded away. The last place to be affected was just behind the angle of the jaw. It occurred to me that the bone might be protecting it. The position was so changed as to allow the rays to come from behind, after which the place soon softened and disappeared.

By the last of July there was no evidence of the disease, except the cicatrix. The applications were made once a week for another month, and now we have him report once a month. The growth never occasioned severe pain, but there was a drawing, uncomfortable feeling. This disappeared as soon as the treatment was begun, but would always return if it was suspended for a few days.

There was another interesting feature worthy of mention. In adjusting the head mask, he often steadied it with his hand so that two fingers were exposed to the ray. They became very red, and shed their nails. This shows that the nutrition of the tissues is profoundly affected by it. The fingers, since guarded from exposure, are regaining their normal condition.

The tumor removed at the operation was hardened and examined by Dr. Wm. R. Davidson, who made the diagnosis of alveolar melanotic sarcoma. A specimen was also sent to Dr. B. F. Cline, of the Post-Graduate Medical School of New York, who confirmed the diagnosis.

We have now under treatment a number of cases, some of whom show improvements, but the time is too short to judge of the effects. Two of them have been entirely relieved from pain.

We had considerable trouble with

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our tubes, five in all;. they would become too high when much used. Baking helped them sometimes, but not always. We have used an improved valve tube, which is claimed to regulate the vacuum; so far, it has not been more serviceable than the ordinary tubes.

Photo-therapy opens up a very interesting field for investigation, which I will not here discuss, but briefly report a few studies we have made. It does not seem to me that theories can be of any great value while our information is so meager. Let us gather the facts first.

To me, the most important question is, whether or not the X-ray is germicidal in its action. The parasitic origin of cancer is not established, although the evidence lends some probability to it, and whether it is or not, the effect of the ray on germ life comes up in its application to a wide range of diseases. If we could kill germs in tissue without destroying it, we would have a most potent remedy.

In conjunction with my associates, Dr. James Welborn and Dr. Leartus Owen, the following experiments were made:

EFFECTS OF X-RAYS ON BOUILLON CULTURES OF PYOGENIC GERMS IN TEST TUBES.

August 9.—Three tubes of sterile bouillon marked 1, 2, 3, inoculated from pus of suppurating wound.

August 10.—Culture media turbid. Shows staphylococci and diplococci, with methylene blue.

August 11.—Nos. 1 and 2 exposed to X-ray.

Time, 10 minutes; distance, 12 inches.

Tubes 1′ and 2′ inoculated from Nos. 1 and 2.

August 12.—Tubes 1′ and 2′ show growth of organisms.

Tubes 1 and 2 exposed for second time to X-ray.

Time, 10 minutes; distance, 12 inches.

Tubes 1″ and 2″ inoculated from 1 and 2.

August 13.—Tubes 1″ and 2″ show growth of organisms.

Tubes 1 and 2 exposed 20 minutes to X-ray.

Tubes 1‴ and 2‴ inoculated from 1 and 2.

August 14.—Tubes 1‴ and 2‴ show growth of same organism as the original tubes.

The glass of the tubes seems to obstruct the passage of the rays, giving a dark shadow with the fluoroscope. Hence, we concluded to expose cultures without the intervention of glass.

EXPERIMENTS CONTINUED WITH BUILLON GELATIN MEDIA IN PETRI DISHES.

August 16.—Three plates, 1, 2, 3, inoculated from pus of carbuncle, showing staphylococci.

August 18.—All three plates show extensive growth of the staphylococci and also a fungus.

Plates 1 and 2 exposed to X-ray for 30 minutes; distance 10 inches. Covers were removed from plates during exposure. After exposure three culture tubes, 1′, 2′, 3′, were inoculated from Plates 1, 2, 3.

August 19.—Culture tubes 1′, 2′, 3′ all show cultures of organisms.

EXPERIMENTS WITH RABBITS.

Two rabbits inoculated in each hind leg with pus showing staphylococci and diplococci.

Localized abscess resulted at the site of each inoculation.

Rabbit No. 1 exposed to X-ray for ½ hour.

No change resulted in abscess, but rabbit died on second day.

September 29.—Rabbit No 2 exposed for ½ hour, the rays being directed onto the right leg.

October 1.—Rabbit in good condition; infection the same; exposed right leg ½ hour.

October 3.—Abscesses are much diminished, but not more so in right leg than in left.

In conclusion I would again remind you that all our work in this line is new. Further experience will be required to determine the exact position of the X-ray as a curative agent, and

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the permanency of its effects. It will be very interesting to study the method of its action, and doubtless many improvements will be made.

In the meantime we have much to encourage us, for if only a small proportion of hitherto incurable are rescued by it, we will be well repaid for the trials so far made.

I cannot close without the remark that while this treatment is still under investigation, we should not forsake previous, well-established principles. Growths should be excised where accessible and all other established means of relief should be employed, and after that the X-ray.

But in all cases not amenable to other methods the X-ray should be given a trial.

NOTE.—June 10—The patient, in a letter just received, states he is entirely well.

SURGERY OF THE HAND IN FACTORY PRACTICE.*

BY L. P. SPEARS, M.D.,
LOUISVILLE, KY.

In presenting this subject I have no apologies to offer, as we all know that it is in small matters that men of vast experience err. It may be that in a few points in this paper I may differ from the rules and regulations laid down by most surgeons, and if I can but stimulate some discussion among the members of this Society either pro or con., this paper will have done all that can be desired. My conclusions are drawn principally from observation and experience with the great number of cases which come under my care, as assistant to Dr. Ap Morgan Vance, from the Kentucky Wagon Works of this city.

First of all, in dealing with an injury of the hand of the working man, it must be borne in mind that the injured member is the mainstay of not only one person who is probably struggling for a bare existence, but perhaps that of a wife and family. It is needless for me then to urge above all things *conservatism* rather than allow symmetry and beauty to influence our first procedure. We cannot tell when a man working in a factory may be injured a second, third or fourth time, nor can we tell when the sacrifice of half or one inch of a finger in order to get a rapid and clean result may so shorten it that as a result of the second injury the hand may be practically useless. I contend that the best means of saving the utility and length of the finger is to do away with the suture material in every case possible, to trim up only hanging or larcerated shreds and extruding bone and use sterile finger bandage and oxide of zinc adhesive strips to mould the part into shape and wait for granulation and new skin to form, and in the great majority of cases the result will be just as perfect as regards appearance, and will be infinitely more useful to the workman. The primary dressing should be allowed to remain as long as five or eight days if no untoward symptoms arise—too frequent and unnecessary dressing not only doubles the danger of infection, but interferes with the healing process.

The second point which I wish to make, and in which I may differ from a great many, is in the preparation of these hands or fingers at the time of first dressing. It must be remembered that when these cases present themselves they are septic, their hands being covered with dirt, machine oil, etc. I contend that where injury has occurred in a man working in iron, it is best not to wash it at all. Trust to the free outpour of blood to have prevented or to have carried out any infection, and dress it with dry sterile gauze without any antiseptic preparation at all. It is impossible to make this hand aseptic unless a general anesthetic is given, which is impracticable, and to wash it imperfectly will only dissolve bacteria incorporated in the oil and in the "horny hand" and tend to infect

* Read before the Louisville Surgical Society, June 1, 1903. For discussion see page 72.

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the wound. It is my experience that the blood dressing is the best. If the injured one, on the other hand, is a wood-worker, and received his injury in this way, it is best to wash it out, as the fine dust from it becomes a part of the blood dressing, and infection is more apt to result. In cleaning off the surrounding area of these cases, gasoline or benzine is the best thing to use.

Another point which I wish to make, and in which I may differ from some, is the best solution to be used when washing is deemed necessary. I believe that the use of plain sterile water, or preferably salt solution, is far the best of all, and on the other hand, that the use of strong antiseptic solution, especially bichloride, which is so universally used among us, not only does no good, but does harm; its use may inhibit the growth and reproduction of germs which may be present, but the damage it does to exposed tissue and the albuminate coating which it forms over the tissue, making a good culture media for the reproduction of bacteria, will, by far override the good obtained from its use. I believe this to be a fact in all cases of fresh wounds, whether it be a cut finger or amputation of a leg or laparotomy.

As to the after treatment of these cases of hand injuries if suppuration does take place, I have found that a continuous wet dressing of sterile water is the best. This to be continued until slough or discharge has about ceased, and be followed by dry sterile dressing.

Another most excellent way to dress such cases is with plain gauze covered with oxide zinc plaster. This plaster is impervious to air, and acts as a poultice to the part, keeping it moist and at same time acts as splint to the part. It might very properly be called the Vance dressing, as he is the only surgeon to my knowledge making use of it.

A surgeon who has entire charge of the surgical emergencies of factories will do well to advise the management to keep on hand sterile gauze and bandages, and have these cases temporarily dressed with this material by some one present until the surgeon can be had. It is the tendency of ignorant people to wrap such injuries up in the dirtiest things found instead of something clean.

To summarize:

First—Use conservatism to the utmost.

Second—Let the primary dressing consist of sterile gauze and the blood present.

Third—The use of bichloride of mercury should be obsolete.

Fourth—Do away with the use of suture material in injuries of the fingers.

Fifth—Use of sterile wet dressing where suppuration has taken place.

THE EARLY HISTORY OF TRANSYLVANIA UNIVERSITY.*

BY FRANCIS M. GREENE, M.D.,
LEXINGTON, KY.

"Transylvania University," as the name indicates, "beyond the woods," was the first noted institution of learning established west of the Alleghanies and in the valley of the Ohio, the "La Belle River." It was founded December 22, 1798, and by the union of Transylvania Seminary and Kentucky Academy. We learn from Collins' History of Kentucky, that Kentucky Academy had been established four years previously, under Presbyterian auspices, and that $10,000 had been subscribed in the East towards its endowment, of which sum President Washington and Vice President John Adams each contributed $100, and Aaron Burr $50.

Lexington, at this early day, was a provincial town of about 1,400 inhabitants, including the white and slaves, or colored, population, with savage tribes of Indians lurking in the forests around it.

The Medical Department of Transylvania was established in 1799, and its

* Read before the American Association of Ophthalmologists, Laryngologists and Otologists, at Lexington, Ky., May 1, 1908.

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faculty composed of some of the ablest and most noted men of that day and generation. The Medical Department maintained only a feeble existence until 1815, when it was reorganized by the election of the celebrated Dr. Thomas Cooper, then of Dickson College, Pennsylvania, to the Chair of Chemistry, Mineralogy and Natural History; Dr. Benjamin Winslow Dudley to that of Anatomy and Surgery; Dr. Coleman Rogers, Adjunct to the Chair of Anatomy and Surgery; Dr. Samuel Brown, Professor of Theory and Practice of Medicine; Dr. Wm. H. Richardson, Professor of Midwifery, and Dr. Chas. W. Short, Professor of Materia Medica and Botany. Dr. Cooper was succeeded by Dr. Blythe in the Chair of Chemistry March 2, 1816, and he ably filled it until 1831. In December of this year Dr. Daniel Drake, of Cincinnati, was elected Professor of Materia Medica and Botany. He accepted the appointment and lectured during the sessions of 1817 and 1818. Resigning at the end of these sessions, he was reappointed in 1823 to the Chair of Theory and Practice, which he retained until 1827, when he again resigned. He was an eminent writer in medicine, and his work in two volumes on "Diseases of the Interior Valley of North America" showed great research and scholarly attainment. Of the surgeons of these early times, Transylvania could boast of one of the most eminent. The following biographical sketch we learn from the late Robert Peter, M.D., who was also connected with the Medical Department and intimately associated with its growth and prosperity.

Dr. Benjamin Winslow Dudley was born in Spotsylvania county, Virginia, April 12, 1785. His father, Ambrose Dudley, a leading Baptist minister, and who had commanded a company in the Revolutionary War, removed with his family to the neighborhood of Lexington in 1786. Here Benjamin received such an education as the neighboring schools afforded, and while very young, was placed under the medical tuition of Frederic Ridgeley. In 1804 he entered the Medical Department of the University of Pennsylvania, being fellow-student with John Eastin Cooke, David Drake and Wm. H. Richardson, all of whom became his subsequent colleagues in Transylvania University. Returning to Lexington, he engaged in practice with Dr. Fishback during the spring and summer of 1805, going back to Philadelphia in the fall and receiving the degree of M.D., March, 1806. He also visited Europe and was a student in the schools of the older masters in surgery. His career as a man and surgeon is one of the most remarkable on record and his name is inseparably connected with Transylvania Medical Department. There were no specialists in those days, and this man's success as a physician and surgeon was remarkable. From Collins' History of Kentucky we learn the following: That in November, 1836, "Dr. Benj. W. Dudley, of Lexington, Ky., restores to sight a young man 21 years of age, blind from his birth from cataract." During the terrible epidemic of Asiatic cholera in 1832 and 1833 in Lexington, Dr. Dudley stood at his post whilst many fled, and with hot water and calomel fought the enemy. It must be remembered that this was before the time of the microscope and of asepsis and antisepsis. The microbe origin of diseases was not then thought of or even suspected, and yet we find Dudley unconsciously practicing asepsis by the use of hot water and the strict observance of cleanliness in all his surgical operations. He became an eminent lithotomist, and during his day had performed the operation successfully more frequently than any surgeon in Europe or America. He knew of no anesthetic to lull his patient to sleep while he performed what was then considered the most dangerous operation of lithotomy. His patient was prepared beforehand by a system of dieting and purgatives and was firmly bound to the operating table, from which he might observe the preparations being made in his behalf. Dr.

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Dudley was remarkable in the cleanliness of his person and dress. His operations were preceded by the liberal use of hot water and general tepid bath, and for the aseptic gown was substituted clean instruments, hands and linen. Even doctors of the old school sometimes had their quarrels and were not as observant of the code of medical ethics as of the code of honor, and duels sometimes resulted. We refer to the following incident in the life of this great surgeon:

"A serious difficulty having originated between Drs. Dudley and Drake, in regard to the resignation of the latter and some matters connected with a post-mortem examination of an Irishman, who had been killed in a quarrel, sharp pamphlets passed between them, and a challenge to mortal combat from Dudley to Drake, which was declined by the latter, but vicariously accepted by his next friend, Dr. Richardson. A duel resulted, in which Richardson was wounded in the groin by the ball of Dudley, severing the inguinal artery, from which he would have speedily bled to death, as it could not be controlled by the tourniquet, but for the magnanimity of Dudley, who immediately asked permission to arrest the hemorrhage by pressure of his thumb where the large blood vessel passed over the ilium. Time was thus given for ligation of the artery by Richardson's surgeon."

There were many other eminent physicians connected with the Medical Department of Transylvania University, among whom we mention L. P. Yandell, James M. Bush, principal surgeon for a number of years in Lexington, Ky.; the late Robert Peter, who gave us the most reliable history of the Transylvania University as found in the Filson Club publications, and last, but not least, our own beloved Henry M. Skillman, who enjoyed a larger consultation practice than any physician in Central Kentucky. Under the name of "College of Physicians and Surgeons," the first medical society was organized in Lexington in December, 1835, and disbanded July, 1896. Among its charter members were Drs. David Bell, James M. Bush, Charles Caldwell, Caleb Cloud, Joseph Chinn, John Cook, Benj. W. Dudley, Robert Holland, Samuel Letcher, John Lewis, William Pawling, Thomas Pinkerd, Robert Peter, J. C. Richardson, S. Richardson, Charles Short, Thos. Satterwhite, S. Theobald, Lloyd Warfield, William W. Whitney, James Darbey, L. T. Yandell and Thomas Mitchell.

The radical change in the method of medical instruction from the didactic and theoretical to the clinical and demonstrative, caused the medical department to decline from 1850 until the beginning of the Civil War, at which time the buildings were destroyed by fire. The library, museum and apparatus were saved, and are now in possession of Kentucky University, which institution in 1865 succeeded to the property, endowment and good will of the renowned Transylvania University. In order to obtain the necessary clinical and laboratory facilities, the medical school was transferred to the city of Louisville where, as Kentucky University Medical Department, it flourishes and maintains the prestige of its worthy predecessor.

During the latter half of the nineteenth century the science of medicine had made greater progress than during any previous century. The microscope had revealed the origin and causes of many diseases. Pasteur had proven that there was no such thing as the spontaneous generation of disease. Lister had demonstrated the value of aseptic surgery. Physicians had just begun to appreciate the value of Jenner's great discovery of the efficacy of vaccination as a prevention of variola. In the dawn of the twentieth century it has become evident that the field of medicine has become too vast for the success of the general practitioner in all its departments, and we welcome the educated specialist who will aid us in the conflict against disease and death.

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Society Proceedings.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Friday, May 15, 1903, Dr. B. A. Allan in the Chair.

ADRENALIN.

Dr. Wm. Cheatham: I had a case of a gentleman at the Galt House this morning which beautifully illustrates the use of adrenalin. He complained of sore throat, and had considerable difficulty in swallowing. On examination I found that he had a tremendously enlarged uvula, as large as my thumb. I gave him a one to ten thousand gargle of adrenalin, and he experienced immediate relief. I have used it in a good many of these cases. I generally use it as a gargle. A little glycerine added to it would be better still. I use it with an atomizer in edema of the glottis with wonderful results in combination with benzoiated albolene.

REFLEX UTERINE COUGHS.

Dr. H. A. Cottell: I believe it is recognized that there are a great many coughs, reflex in character, which may be attributed to irritation of almost any part of the body. We all hear of gastric coughs, due to irritation of the pneumogastric; obstinate coughs have also been relieved by removal of foreign bodies from the ear. I have had in the last three or four months some cases of which I would call uterine coughs.

I had last winter a woman who had gone to the fourth month of pregnancy with a cough which I could not relieve. There was no expectoration, only a constant dry cough. She began to show some moist rales in the smaller tubes and some ugly, dry rales in the larger tubes. Following delivery of the child she promptly got well in less than a week, after coughing for months. I now have on hand a lady three months pregnant who is coughing constantly. Nothing makes any impression on it, and I think the case belongs in the same category.

Dr Wm. Chetham: I have a similar case. I remember a lady on Second street whose child is now five or six years old. I was treating her for a cough, and one morning when I called to see her, her husband called down to me that I need not come up, that the baby was born and there was no more trouble. The new doctor had cured her.

We hear a great deal now of the effect of cocaine in the nose upon uterine troubles. I suggest that Dr. Cottell try that.

Dr. Louis Frank: I want to speak of a case referred to me a year or more ago by Dr. Marvin. I look upon it, however, as a cough more of an hysterical character. This was a girl 24 years old who had been teaching school. She was advised by her physician to quit teaching, and he wrote to the School Board that she had tuberculosis, and that it would be dangerous for her to continue. She consulted Dr. Marvin, and he referred her to me because of some genital symptoms. I found that she had retroverted uterus, enlarged, and I thought there were some adhesions between the omentum and the uterus at the fundus. She had a persistent hacking cough all the time, was emaciated, and in a wretched condition. I advised operation, not for the cough, though I believe it might be reflex or hysterical in nature. I operated a short while afterward, and found she had a small sub-peritoneal fibroid tumor, very small, with a number of adhesions, especially about the appendix, which was adherent at the tip to the fundus uteri. The appendix was removed, but the ovaries and tubes were normal, and I thought it best to leave them. Her recovery was good, and she had no trouble afterward. The cough disappeared, and she did not cough a single time after the administration of the anesthetic.

She returned to me in about ten months with this cough again. She had now an eruption over the chest, very ugly looking. I referred her to Dr. Bloom, and he diagnosed it scleroderma

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and sent her back to me with a prescription. I observed her closely for a while, and the breaking-out disappeared. After a month or six weeks she returned with a similar eruption, and the case now began to look suspicious. Upon investigation I found that she had burned herself with sulphuric acid applied to her chest. She also developed an eruption about the ankles which was traced to croton oil; also an eruption on the thighs, due to the application of acid. Dr. Bloom saw her again, and agreed as to the cause of the skin trouble. She has been out from under my observation for three or four months, because I had become disgusted with her. I am certain she was a pervert, and probably produced pleasurable sensations by means of these escharotic agents. I am certain she was a masturbator. She had a good deal of edema about the genital organs, and with the appearance of the symptoms above mentioned, the cough began again. I expect to make a full report of the case later.

EXHIBITION OF FINSEN LIGHT APPARATUS

Dr. Thomas L. Butler: I thought it might be of interest to show the Finsen light apparatus, since there is so much written on the subject, and the majority have only a vague idea as to what it is. This apparatus is one of the new forms of Finsen light. We all probably know that the original Finsen treatment was by concentrated sunlight, and for the want of sufficient sunlight, especially in the winter in the neighborhood of Copenhagen, an artificial light had to be devised. The original Finsen lamp was a very powerful arc light, taking about fifty amperes. The patient was placed some distance from the source of light, the lenses and water cell superimposed. They found that it required about forty-five minutes' exposure each day to get up a reaction, which was a tedious process. It also required a nurse for each patient to make pressure on the diseased tissues in order to produce a local anemia.

The present Finsen treatment consists of lamps of less power, but the patient is placed closer to the source of light. This outfit is simply an arc light, the two carbons being placed close to the lenses. Clear water flows through this hollow shield to absorb the heat rays, allowing the actinic rays to pass with as little heat as possible. Some have recommended tinting this water with methyline blue, but the general opinion is that this does no good. These are rock crystal lenses, since ordinary glass offers great resistance to the blue and white rays. In treating patients the lesion is pressed close against the lens, rendering the part as anemic as possible. The posterior lens is flat, the other slightly convex, the idea being to focus the light a little beyond the point of contact with the patient, to drive it as far as possible. One case of lupus, after fifteen minutes' treatment, showed marked reaction, though that is not the rule. It usually requires from five to fifty treatments. I noticed in an article a few days ago that instead of placing the patient against the glass to produce localized anemia, some are using adrenaline by cataphoresis in this way producing a local anemia without the necessity of an attendant.

This treatment was first used for skin tuberculosis, but it has been found that it will not only cure lupus, but is very efficient in superficial epitheliomata and other skin troubles. There is a decided difference in the effect of the ultra-violet rays and the X-ray. The X-ray is not a germicide, as was shown before the British Medical Association by Freund, of Vienna, but the ultra-violet ray is a very powerful germicide. It will kill the staphyloccus in a few seconds.

Dr. H. A. Cottell: The apparatus is extremely interesting. I remember when I was a student that Prof. Bell said that the greatest discovery since Newton's day was the chemical effects of light. Nothing on earth, animate or inanimate, can come in contact with

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sunlight without undergoing change. We know that the actinic ray is penetrating beyond any luminous ray, and that it is possible for a photographer to make a picture of a star never seen with a telescope because its actinic ray penetrates distances infinitely beyond the reach of the luminous ray. I have a notion that after the X-ray is understood it will be found to be something like the actinic ray, and that a good deal that is credited to the X-ray may be assured by other forms of light.

There is a treatment for goitre practiced by Dr. D. W. Yandell, and called "the Indian treatment." It was the iodide of mercury ointment. He did not attribute the good results often obtained so much to the ointment as to the fact that the patient was made to sit in the sunlight while the skin over the goitre was rubbed with the ointment. Profs. Roentgen, Finsen and others have simply enlarged upon experiments with light made by others long before their time.

I would like to ask what keeps the lens in this instrument from becoming a burning glass.

DR. T. L. BUTLER: We do not use a lens that will focus the light down to that point. We take a 2,000-candle power arc light, and the heat scarcely amounts to anything at all on account of the water cell. If we did not use the water it would cook the tissues, of course.

The essay was read by Dr. H. A. Cottell, entitled "Sepsis Following Labor and Abortion."

He said in substance:

It is, I think, a clinical fact that sepsis accompanying or following abortion is as a rule milder and more manageable that sepsis post partem. It is also true that the term blood poisoning stands for no clearly defined pathological condition to the mind of the average doctor.

There can be no question that all sepsis is occasioned by microbes, or their toxines (or both), and it is equally clear that some microbes produce a far more serious form of poisoning than others, but the pathologist, so far as I have been able to follow him, has not yet classified the various forms of sepsis, making out with precision the species of microbe responsible for each.

Quoting from Simon, "Petruschky has shown that in severe cases of septic infection it is almost always possible to find a streptococci in the blood, while in the milder cases a negative result is reached. He has found, moreover, that while, as a general rule, the presence of streptococci will justify a grave prognosis *quad vitam*, death does not necessarily occur in every case. Thus he examined the blood in five cases of peurperal fever, of which one only died, and found no pus-making microbes in the blood of any of them. On the other hand, in 9 cases of puerperal infection he found streptococci in the blood of 8, and staphylococci in 1 only. Of these 3 died, 6 recovering."

According to Lazarus Barlow three distinct pathological states are confounded under the one name of blood poisoning. They are pyemia, septicemia and sapremia. "When an irritant such as staphylococcus pyogenes aureus or streptococcus pyogenes gains access to the blood-stream its effects vary according to circumstances. In some cases it probably is followed by no ill effects, for experiment shows that the blood is capable of destroying considerable numbers of bacteria when they are injected into the veins of healthy animals. If, however, the micrococcus be of the right degree of virulence to lead to pus formations, and if it become lodged anywhere as a septic embolus, it probably always causes a local abscess. On the other hand, if it be of so great a degree of virulence that it leads to negative chemiotaxis, abscess formation is out of the question.

"Now, the last two mentioned conditions correspond in some degree with clinical conditions in which micro-organisms have gained access to the blood-

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stream, and which are known as pyemia and septicemia. Along with pyemia and septicemia it is convenient to consider an allied condition known as sapremia. But sapremia differs from pyemia and septicemia in that the micro-organisms are incapable of life within the blood and tissues, whereas in pyemia and septicemia the micro-organisms are not only capable of life within the blood and tissues, but actually gain access to them, are carried in a living condition to distant parts, and produce toxic substances within the body itself. Though we must allow that in both pyemia and septicemia the symptoms of the disease are due rather to the toxic substances formed by the micro-organisms than to the actual presence of the micro-organisms, as such, in the blood or tissues.

"These are the fundamental differences between sapremia on the one hand, and pyemia and septicemia on the other hand: That in sapremia the laboratory for the preparation of toxin is physiologically outside the body, and the micro-organisms concerned are putrefactive, and not pathogenetic micro-organisms, while in pyemia and septicemia the laboratory for preparation of the toxin is in great part physiologically within the body, and the micro-organisms concerned are pathogenetic."

In the above quotation the author clearly differentiates the three distinct pathological conditions which have long been confounded under the common name of septicemia; that is sapremia in which toxins are the disturbing element, no microbes entering the blood; pyemia in which pus-making microbes enter the blood, and septicemia in which pathogenic, but not pus-forming, microbes pass into the blood.

Adhering to these distinctions we may readily understand the marked differences presented by different cases of puerperal and post-abortion fever; that is, we have three distinct pathological states existing, in each of which, however, subdivisions may be established according to the variety, or species, or genus, of microbe, or plasmodium, involved. This last classification has not been made, nor will it be until the subject has been submitted to long experimentation and searching study.

That blood poisoning should be more frequent and less manageable after labor than after abortion is probably due to the fact that labor presents a larger placental site than abortion, which with lacerations of the cervix, vagina and perineum afford a far greater surface for the absorption of toxins or microbes, which thereby find ready access to the blood. Moreover, the vitality of the lying-in woman has been conditioned and reduced by the pregnant and peurperal state, and therefore her system offers less resistance to these invaders and the pathological conditions induced by them.

In the course of my practice I have seen two cases only of death from malignant sepsis following abortion. I have seen many cases in which there was rise of temperature, chills, headache, etc. I remember one case wherein the temperature went to 107½°, but the patient did not die. I have seen a number in which the prognosis was very dark indeed, but they improved as soon as the uterus was cleared out. In one case in which I called Prof. Turner Anderson in consultation, the woman had practiced abortion on herself with a new catheter. She was close to the second month. The fetus was expelled, but the secundines were retained. She had a high temperature, above 105° F., and it stayed up for from 12 to 24 hours. There was no ballooning of the abdomen. Prof. Anderson advised emptying of the uterus as soon as possible, and I made an unsuccessful attempt to remove the contents with placental forceps and a large dull curette. I then went home, but was called up in the night and found the patient having one chill after another. There was great pain and a high temperature. I succeeded this time in emptying the

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uterus, and irrigated it with a carbolized solution. Her temperature dropped two degrees during the procedure, and by morning was normal.

As a rule, in abortion I have little fear of sepsis. I believe that if the micro-organisms do not come from the outside, from the fingers of nurse or physician, that they will do no harm. I do not believe a woman can have anything so rotten in the uterus as to produce a fatal septicemia. Unless some true septicemic microbe has entered the circulation, such a case is a sapremia, and she is poisoned by the toxins, there being no pathogenic organisms in the blood. It is curious to note that we sometimes have a fever after a perfectly normal labor. This condition is generally sapremic and usually subsides in a day or two, under proper treatment.

If, however, a specific microbe (e.g., that of erysipelas) is introduced, you will have a true septicemia, or pyemia, which will almost always prove fatal.

We sometimes see very marked symptoms in cases where there is the least reason to expect them. Three or four years ago I delivered a primipara after a prolonged labor. The membranes had prematurely ruptured, and there was a rigid os. The woman had to be delivered by forceps, and there was a small tear of the perineum. She went through the puerperium without the slightest elevation of temperature, and came out brilliantly. Four years later I was called to deliver her of the second child. The pains came on, and labor developed with such rapidity that I barely had time to get into the house and wash my hands. I was at the bedside just in time to catch the head and ease it over the perineum. The placenta came away a la Crede. The finger was never put into the vagina afterward. On the third day a furious fever developed, and she was sick for ten days with blood poisoning. Prof. Anderson saw her and attributed the entrance of the poison to a little puerperal ulcer in the back part of the vagina. This case was doubtless simply sapremic, though Prof. Anderson and I had grave fears that it might prove otherwise.

DISCUSSION.

Dr. Jno. G. Cecil: I have often been very much mystified by cases of sepsis coming on after labor and after abortion also. I think a point which will be of very great value to us in the management of these cases will be the further elucidation in the matter of differential diagnosis as to the kind of toxin at work. So far as I can ascertain, the antitoxin treatment for streptococcus has been quite successful, but the serum does not have any effect upon the staphylococcus or upon such septic troubles as sapremia. The difficulty lies in determining what kind of an infection we have to deal with. For my part, I do not know that I can quite line up with the essayist on the subject of retained secundines, decomposing clots, and so on. Just what trouble can occur from these is not always clear. True we see many times these foul masses delivered by the use of the curette or douche with good recovery. Sometimes we see cases that point towards septic trouble that do not yield to irrigation or curettement. Again, I am not prepared to say that we do not get from retained secundines decomposing conditions that result fatally even after they have been removed. Whether it is due to poisons generated by these decomposing secundines or to poisons accidentally admitted into the cavities at the time of the operation I cannot say. I saw recently an explanation of these post partum troubles that appealed to me as having something in it; that these cases which sometimes result fatally are not always due to sepsis, but to phlegmasia dolens, where the sapremic germ has found entrance through the placental site and infected the blood supply through the lower extremities. That is Hurst's explanation. We know how terrific some of these cases can be, and while some make a

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perfect recovery others do not. I saw one in the City Hospital twenty years ago when I was interne there. Phlegmasia developed and rapidly became so destructive of one of the lower extremities that the leg was a mass of abscesses and she died very promptly. Of course others die from the dislodgement of thrombi, etc. I recall a case that I believe Dr. Bailey saw with me in Jeffersonville in which the line of symptoms was similar to this, but a thrombus lodged in the brain and she died of meningeal complications. I recognize that there are these different forms of sepsis and that they may be equally dangerous. The most violent forms I have seen were those due to the streptococcus or staphylococcus, in which there were no symptoms of pus formation outside of the blood itself. The cases which I fear most are those which come up without symptoms of localized pus. These I have seen die very promptly.

Dr. Wm. Bailey: I believe there is something in the classification of these conditions, and it would be interesting if we could at all times readily determine the character of the germ producing the trouble. I do not agree that in cases of abortion, particularly those produced artificially, the uterus may without hurt retain either portions of the fetus or membranes undergoing decomposition. I am free to say that I feel very much safer with these uteri completely empty. I saw a case of abortion produced by a catheter recently; the fever was up to 104° and the uterus was carefully emptied by the curette with almost immediate reduction of the fever and no bad results followed. At the same time curettement should be practiced with the greatest care and skill, else additional surfaces may be opened up and the woman left in worse condition than before. In many of these cases the contents of the uterus will be thrown off naturally, and I would rather trust to nature than have curettement performed with a sharp instrument so as to wound the uterus. As Dr. Cecil remarks, the most dangerous cases I have seen are those where the uterus was apparently clean, the discharge not offensive, and curettement was practiced only in the belief that something might remain. It would be well indeed in many cases to interrogate the blood as to the form of the germ, and then it might be possible to use the antitoxin for that germ until nature might be able to overcome the condition. If we can get the right antitoxin, it is possible to counteract the effects of the germ, just as in diphtheria. That is the ideal way. Until we can study these more closely and get an antitoxin for the specific germ we cannot hope to manage these cases successfully. I am free to say that sepsis after abortion has not been as dangerous as that following delivery at full term. It may be on account of the extent of the surface involved, and it may be that the germ is that of sapremia, where it remains outside of the blood current. The cases are certainly much more dangerous where it has entered the circulation.

Dr. Thos. L. Butler: This is a subject of great interest to all of us. There is a great deal yet to be learned about it. We have five or six different conditions, which vary according to the cause of the poisoning. In the case spoken of by Dr. Cottell, where he simply used the douche and the symptoms subsided, there was evidently a sapremia. Here we have simply the effect of absorption of the products of a non-pathogenic organism. It is generally accepted that a true puerperal fever is due to a streptococcus infection. This is not always a pyogenic organism. We have a streptococcus infection in surgical troubles, such as cutaneous erysipelas, where no pus forms at all. In these conditions the serum may be tried with benefit. In septicemia we have the living bacteria multiplying in the blood, and we get the effects of the absorption of the products as well as of the micro-organisms. On the other hand, we may have

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a pyemia without a septicemia at all. We may have septic emboli which have broken away from the original focus of infection and deposited throughout the body, especially in the lungs. In this condition I do not believe that the anti-streptococcic serum promises a great deal, although I saw a case in the City Hospital with abscesses in various parts of the body, and after a few doses of serum it all cleared up. Dr. Cottell will remember a case where we tried the serum very vigorously. We made a culture from one of these abscesses and found it mainly streptococci. The serum was used with apparently no benefit at all. The subject is certainly one of great interest.

Dr. Louis Frank: I was very much struck with Dr. Cottell's remark that the death rate after abortion was less than following labor. I believe that has been the experience of most of us and that the reason is due partly to those he gives and also that there are fewer abrasions about the genital tract after abortion. I believe another reason is that at full term septic clots in the uterine sinuses are more apt to escape into the general circulation.

This subject of puerperal sepsis, so-called, is the biggest subject we have ever had up for discussion in this Society. It is a theme which would consume many hours to consider because it has so many phases and there are so many conditions to discuss. I believe there are few cases of infection following labor that result in septicemia or pyemia. We make a great mistake in grouping the many varied conditions resulting from an infection under the one term of puerperal sepsis. We should make a more thorough investigation and learn the exact pathology present in each case. Certainly far less than half of these cases are septicemia and pyemia. In abortion cases sapremia is the most frequent condition, due to absorption of toxic substances. I disagree with Dr. Cottell in that I think we may have a pathogenic organism producing toxemia or sapremia. I have seen this in several cases with absorption of toxins just as we have in localized abscess. We see this in abscesses in other parts of the body, but in connection with parturition we fail to recognize it because we think the symptoms due to non-pathogenic organism.

I want to endorse what Dr. Bailey said about curettement. Formerly in my work in this class of cases, and I have seen a great many of thom in consultation and following abortions; I used a curette in all of them. I have seen cases die when it was used and when it was not. But I believe it is a bad practice, and the more I study this subject the more I think the curette is the one thing we do not want. I think the majority of them will get well without the curette or anything else having been introduced into the uterus. I think the thing to do is to keep the parts clean, and not invade the uterus, unless with the finger or dull curette. This thing of scraping away the entire inner surface of the uterus is a very bad practice, and I do not believe in it after absorption nor after labor.

Puerperal sepsis is a confusing term. It is very unsatisfactory. I have seen many of these cases with peritonitis, without micro-organisms in the blood, without pyemia or septicemia as we understand these terms. These terms are used too indiscriminately. I have seen cases of infection with a great abscess in the broad ligament that were called puerperal sepsis. I remember a case last year following an abortion where the woman had an enormous abscess. These are cases of puerperal infection, not pyemia or septicemia. I recently saw a woman in Jeffersonville with a violent infection without any infection of the uterine structures at all.

We see, also, cases of salpingitis, with pus in the tubes. I have seen cases of abscess in the uterus itself following puerperal infection. Dr. Cartledge reported a case of gangrene of the uterus following infection, not a pyemia or a septicemia, but a localized

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infection. I think we make a mistake in treating these conditions in a routine manner and using antitoxins of various kinds. I have used the streptococcic serum in a number of cases after having examined the blood, and have also used the Crede ointment. I have never seen any good resulting from any of these forms of treatment. What good results I have had in cases so treated was from the resistance of the patient and other treatment used at the same time. We can do away with serums and ointments and get just as good results.

Dr. Frank C. Wilson: I believe a great deal of this septic condition comes from the local condition of the uterus. My experience with abortions has been that the early cases involve little danger, but that between the second and fifth month the danger is really greater than at full term. It is very natural that the secundines should be more closely attached and much more apt to be retained at that period than in the earlier or later periods. I am satisfied that leaving material that may decompose involves a certain amount of danger. I recall a case many years ago involving prolonged instrumental labor, the child weighing 13 pounds. The woman was a primipara and had been married twelve years. The labor was prolonged, requiring four hours' application of the forceps before delivery. It was against the judgment of either of us to attempt delivery, but it was the first child after a long marriage, and both parents were anxious for a living child. A great deal of traumatism resulted, inflammation and fever followed and metritis developed. All of the membranes were removed, but the traumatism left the tissues in such condition that sepsis resulted. In that case I was struck with the effect of irrigation. It was before the day of curettement, and after a free irrigation with permanganate of potash the temperature would drop down in half an hour, remaining down for four or five hours. Then it would return, and I would repeat the irrigation. I kept that up for eight or nine days, and the case recovered. I have seen the same results several times since then. I believe in that case there was simple absorption of the toxins, without any entrance into the blood of the germ itself. The irrigation checked the formation of these toxins for the time.

I believe that in the modern management of these cases a much more thorough investigation is demanded and we can now adapt our methods much better than at that time. Blood examination should always be made and our method of treatment guided by that.

Dr. H. Horace Grant: I would like to say a word about treatment. What Dr. Frank said about the pathology is as nearly correct as we can get it. My experience is that after abortion we see an infection which is productive of symptoms due to retained secundines, pain, high temperature, bogginess of the uterus, and so on. Sometimes we have the absorption of ptomaines, the products producing sapremia. Whenever the temperature and pulse indicate that infection has taken place, I think curettement is indicated. If this can be done with the finger, so much the better. If not, foreign products should be removed with a blunt curette, and irrigation established. If it is found that the uterus is thickened, and septic metritis has resulted, the question of complete removal comes up. If this is not done promptly during the first two or three days, it is too late to do anything at all. Conditions of this kind are very common, and my experience has been that they all yield to treatment in a very satisfactory way. I have seen no case of death following abortion in which prompt emptying was done. I have seen two cases of death where it was not done or done too late.

In the puerperal state at full term, I believe that the advisability of curettement is probably very rarely, if ever, seen. The condition here presented is one in which the secundines have been

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removed and curettement accomplished nothing. It has generally infected the sinuses, and irrigation is often of great service, because it washes away the septic material and keeps the uterus clear of blood clots, which always greatly add to the infection. My experience has been like that of the other speakers, that these cases are less satisfactory than those following abortion. Where general infection has occurred, such as septicemia after labor of a severe type, the prognosis is always of the gravest character. Septicemia is fatal in 50 % of the cases, and irrigation is the best treatment.

I have observed three forms of sepsis. Septicemia with and without metritis, both in abortions and following labor, also septic peritonitis, which is far less common and more fatal. It represents the rarest form of infection. The treatment consists in emptying the uterus in abortion and removal of the uterus if netritis occurs, and it can be done early. At full term, irrigation of the uterus as often as possible, and drainage as well.

Dr. H. A. Cottell: In the first place I flatter myself that I have stirred up the most interesting discussion of the year. My object was principally to call attention to the value of differentiation of the different kinds of sepsis. The word means simply poisoning, and I do not see any objection to its use, but it is very important to differentiate between sapremia, where the microoganisms do not enter the blood and pyemia and septicemia in which they do. You do not always have to have pus in the circulation, for it may not get any further than the perimetrium, while in true septicemia there is no pus at all. We are always glad to find the suppuration localized. True septicemia presents a formidable and generally fatal attack.

I have seen two non-fatal cases of this kind, the patient lingering in long fever until the disease wore itself out. I think Dr. Cecil, Dr. Bailey and Dr. Frank made me say more than I intended. I did not say that in all cases of abortion with retained secudines we might not have more than a simple sapremia. We may have organisms introduced by the hands of the doctor. I think when the secundines have not been interfered with, if they rot they merely produce sapremia, and only the toxins enter the blood. Specific microorganisms have doubtless been introduced into the uterus without getting into the blood, and their toxins may enhance the blood poisoning. As to the curette, I never use it except as a last resort. I use a blunt instrument, almost invariably.

THE LOUISVILLE SURGICAL SOCIETY.

Stated Meeting, June 1, 1903, Dr. Ap M. Vance in the Chair.

Essay of the evening was read by Dr. Llewellyn P. Spears, entitled "Injuries to the Hand." (See page 60.)

DISCUSSION.

Dr. Thos. L. Butler: I merely want to endorse the most of what Dr. Spears said. I have not had much experience in treating the hands of men working in wood, but what he said about the dressings for men working in iron is true. I do not know why it is, but for some reason the grease these men have on their hands does not seem to be septic. Possibly the heat from the machines may have sterilized it, but it certainly is a clinical fact that it is not septic. I used to think that where the end of the finger was mashed off, the thing to do was to go back and do an amputation, but I have since changed my views in that regard. I had a case recently in which the end of the index finger was mashed off, the bone was exposed, and I let that come away as a slough, and nature did a better amputation than I could have done.

As to dressings, I do not believe a mild antiseptic does any harm. A mild bichloride dressing does some good, especially in the summer time,

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and prevents putrefaction to some extent. Moist dressings are good. We cannot emphasize too strongly the question of conservatism in treating the hands of workingmen, and the tendency is to be too radical. This is particularly true with regard to injuries of the thumb and index finger.

One other point not brought out in the paper is that where we have to amputate on account of the nature of the injury, we should not cut off the heads of the bones in order to make a pretty amputation, especially of the metacarpal bones.

Dr. J. J. Moren: I know nothing about the treatment of injuries to the hand, but I am often called upon to treat the palsies that follow. I have on hand now a young lady injured in March, and she now has paralysis of the extensor muscle of the thumb. I do not know whether I have a nerve or tendon to deal with. Electricity is of great service in helping to distinguish in this respect; if we can get the reaction of degeneration the nerve is injured. It is one of the best therapeutic agencies, as it improves the nutrition of the nerve and muscle.

Another side of the question is that which concerns the malingerers. Many of these people belong to lodges paying weekly allowances for injuries, and it is to their interest to leave off work and draw their pay. Sometimes it is very hard to determine whether there is a real injury or not. Last Saturday I saw a man who was paralyzed in one limb since February 7, a typical hysterical paralysis of the leg, following a slight injury to the back. He is absolutely unable to walk. There is complete anesthesia, but retention of all reflexes, and the muscles respond to the electric current.

Dr. Louis Frank: I have had a little experience in emergency work, and some of that has been of this character. I want to endorse everything Dr. Spears said, for I can see a reason for all of it. I certainly think we should not amputate unnecessarily. The question of asepsis in the case of metal-workers is one that I have not heard mentioned before. It is probable that all metallic material undergoes some change in the tissues, and gives off some of the metal which acts as an antiseptic. In the case of iron-workers, it is likely that the iron makes some combination with the serum or other agents in the blood, and undergoes some chemical change. I think the use of bichloride is to be condemned in all cases. I never use it except in cleaning my hands, and then it is outside where there is no danger of any part of the patient coming in contact with it. It often does harm rather than good, and irrigation of fresh wounds with it is to be condemned. When I cannot get physiological salt solution, I use plain sterilized water. I have even used water direct from the hydrant without any bad results. If pain arises, I tell the patient to immerse the hand in hot water. A number of layers of gauze act as a filter and also stimulate the flow of blood and serum to the part and keeps it moist and its antiseptic action can be asserted.

I have seen benefit from the use of the oxide of zinc plaster instead of sutures in all characters of wounds. I have used it according to the method of Dr. Vance, and find it acts nicely in moulding the tissues and in securing pressure. This plaster can be secured in an aseptic condition, and I have applied it direct to wounds with gratifying success.

We should be careful not to make our dressings too impervious to air. If there is no provision for evaporation, we may set the saprophytic bacteria to work, and a troublesome eczema may follow. Where impervious dressing is used, it should be frequently changed, unless a moist dressing is employed. When moist dressings are used this eczema does not occur. This eczema has given me a great deal of annoyance in one or two cases, and it kept up in spite of everything I would use. I think probably I got the best results by

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leaving off all dressings and exposing the wound to the air, applying a light dressing after two or three days exposure.

I agree that we should be very careful about using sutures in these cases, on account of the danger of carrying bacteria into the skin.

Dr. Ap M. Vance: I have practiced this method which Dr. Spears recommends for a long, long time. Time and time again I have taken mangled hands and saved the fingers where an effort had been made to pull them off at times. I let the first dressing stay on three or four weeks, and when it is removed find the fractures healed, the skin approximated and a complete cure with no redress at all. It was known years before antisepsis was ever heard of that the blood dressing was good. One of the beauties of this blood dressing is that you can remove a part of it and leave the rest on as a splint. I have used gasoline for about twenty years. I first began to use it as a result of experience in a printing office, where we used it to clean the printer's ink off. After I had been using it a long time I saw in one of the Scandinavian journals that it was an antiseptic. The blood dressing is nature's dressing. Sutures are bad for the fingers on account of the constriction.

Dr. J. S. Chenoweth: I think it is time we were getting down to a little every-day surgery after all the discussion about appendicitis and other major operations. I agree with pretty much everything that has been said. I have cut off very few fingers, and think it would be a good idea if every man were prohibited by law from cutting them off for the ten years, then he would not want to cut them off. I have seen a great many of these mashed hands, and very few of them have sepsis. I do not use bichloride, and in nearly every case where I have seen it used the wounds suppurated. I use peroxide of hydrogen frequently, and find it to be perfectly harmless. Very frequently I make no effort to get rid of this black grease until the skin peels off. Dr. Spears did not mention the examination of these injuries for the presence or absence of injury to nerves and tendons; such injuries should be searched for carefully and repaired.

Dr. I. N. Bloom: For Dr. Frank's benefit, I will say that if he will remove the dressing from these weeping eczemas and sprinkle some such powder as oxide of zinc on them, instead of applying the ointment, and then expose them to the air, he will soon get rid of them.

Dr. J. G. Sherrill: I can only commend most of what has been said. The benefit which comes from the dry dressing is due to the fact that bacteria do not grow where the wound remains dry. If provision is made for free evaporation these wounds will act very nicely.

In one of my early essays I recommended that gauze be applied to wounds of the hand and cotton wrapped around the gauze and saturated with compound tincture of benzoin. It did me good service, for the dressing could remain on indefinitely without any disturbance. Since the introduction of balsam of Peru I have abandoned the benzoin dressing, using the former instead, yet I prefer the plain gauze dressing where I can get an absolutely dry wound. The chief objection to the balsam and oil is that if kept up too long exuberant granulations will form.

I believe the passage of sutures through the skin is very likely to cause suppuration for the abrasion of the skin will allow the bacteria already growing there to set up stitch abscesses. Like Dr. Chenoweth, I think wounds of the nerves and tendons should always be approximated, but for this sutures are not always necessary. The moulding of the parts will allow little chance for displacement.

Dr. Ap M. Vance: I want to say one word about the use of mild carbolic solutions. This is more dangerous than the bichloride or anything else. I have seen several gangrenous fingers as a

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result of the application of mild carbolic solution. Even a solution as mild as one in eighty will produce gangrenous fingers.

Dr. J. G. Sherrill: I have found that if you use hot applications with a carbolic solution, no matter how weak, the carbolic acid acts on the tissue layer by layer, and the more you dilute it the more vigorously it acts if kept on continuously. But if pure acid is applied, followed by alcohol, there will be no damage at all.

Dr. L. P. Spears: I thank the speakers for their favorable comment upon the paper. I had hoped to bring out some adverse criticism as well as favorable. I was interested in Dr. Butler's remark about not removing the heads of these bones.

This procedure is usually followed by a little seepage of serum from synovial membrane which is very persistent. I believe this complication can be avoided by scraping the head of the bone before closing.

JEFFERSON COUNTY MEDICAL SOCIETY.

The Jefferson County Medical Society met at the Galt House, Tuesday, June 16, 1903, Dr. William Bailey, President, in the chair.

Dr. Ap M. Vance reported a case of resection of the colon in a virgin 29 years of age, with disease of the ovaries and tubes on both sides. The appendix was removed and uterus resected; subsequently an abscess formed on right side, resulting in a sinus with a granulating ulcer. This was curetted and opening recurred in center of the abdominal scar. This was traced to the base of the appendix and found to originate in the cecum. Resection was made by end to end anastomosis of the ileum to the colon, using small catgut. Patient practically well in ten days.

Dr. J. B. Bullitt referred to the difficulty of anastomosis in this locality and said it was possible in this case because the large intestine was somewhat reduced in calibre and the small intestine somewhat enlarged.

Dr. W. B. Gossett reported a case of accident to a German lady, 23 years old, 7½ months pregnant, who had slipped through an opening in the sidewalk. Complained of excessive backache for three weeks; neuritis developed in back and extending over abdomen, with retention of urine. It was deemed best to bring on labor, and a living child was delivered, but died in a few hours in spite of the use of an incubator. Sapremia developed in the mother, but disappeared under douches. She is now very nervous and complains of her back all the time. Dr. Gossett reported that he had been absolutely unable to find a hospital in the city which would admit this class of patients.

Dr. J. Garland Sherrill reported a case of what he had diagnosed sarcoma of the superior maxillary five years before, at which time he had advised against operation. Patient was a young girl and the tumor was about the size of an egg at that time and had pushed out two of the teeth. A needle was inserted and easily penetrated the bone tissue. Coley treatment was used for some time without results and patient drifted into the hands of another physician, who applied a paste externally, which produced a scar as large as a dollar. Twenty applications of the X-ray were made and the size of the tumor slightly diminished. It has not increased during the last year, and it is now a hard growth, apparently true bone. Patient now seeks operation and Dr. Sherrill asked advice as to the propriety of removing the growth. He was inclined to the belief that if it had been cancerous it would not have gone on for this length of time and was inclined to look favorably upon operation.

Dr. Ap M. Vance expressed himself as opposed to operation in malignant disease of the superior maxillary, but thought it advisable in this case if the girl were in good condition and suffered pain.

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PERFORATION IN TYPHOID FEVER.

Dr. Louis Frank reported a case of operation in the case of a man with perforation following typhoid fever in the third week. Patient lived in the country, was 32 years of age, and had been seized with sharp pain in the right iliac fossa, which disappeared after copious movement of the bowels. Two hours later his temperature became subnormal, and continued so for twenty-four hours. When Dr. Frank saw him his temperature was slightly above 99°, pulse between 86 and 90, which rapidly rose to 112. There had been no vomiting, and distension of the abdomen was present only for a short time after the sudden pain. Patient presented a good appearance, without pain or tenderness and was not depressed. Tympany was present over entire abdomen as far as fifth intercostal space, with marked rigidity and absence of dullness. The pulse was hard and characteristic of peritonitis. Diagnosis of perforation was made, with prognosis of death, with or without operation. Patient asked that he be given the slight chance by operation. Abdomen was found filled with pus and fecal matter, and intestines distended above the point of perforation; from eighteen inches above to the perforation the gut was flat. The perforation was closed with difficulty, the cavity washed out and five drains inserted. Patient was put to bed in fairly good condition, and was left by the surgeon next morning with a pulse of 130, no vomiting or pain. He died on the second day.

Dr. Frank emphasized the point that the only hope in this class of cases comes from early operation, and deplored the error of deferring them until too late to do good. He also believed that when a man has any chance at all, it is the duty to give him that chance, regardless of his own reputation or that of surgery in general.

Dr. James B. Bullitt referred to a method of suturing in such cases which had been practiced at Johns Hopkins. Instead of suturing the ulcerated portions, the point of ulceration is sutured to the abdominal wall. This would prevent escape of the contents of the intestine into the abdominal cavity and secure better drainage. The speaker was inclined to look with favor upon this procedure, since it would also save time in operating.

Dr. Frank was of the opinion that the time could not have been shortened in this individual case, since the entire operation had required not more than twenty-five minutes, and that there would have been the same difficulty in securing the intestine.

HYSTERECTOMY.

Dr. W. H. Wathen exhibited a specimen and reported a case of hysterectomy in a patient suffering with violent infection of the uterus following miscarriage at about the seventh week. There was no distension or pain, temperature ranging from 102° to 107°, the condition having continued for about a week. The uterus was found fixed, with large mass of exudations on the right side. The uterus was curetted with the exception of one point left to show the degree of infection, and was removed by hysterectomy. The systemic infection was pronounced, pulse being 140, with chills every day. Dr. Wathen called the attention of the general practitioners to the fact that they are the ones who see these cases early and that this deplorable condition may be averted by care in removing the membranes that remain by use of the finger. Result of the present operation yet in doubt.

Dr. J. Garland Sherrill reported a similar case following abortion in a young married woman 20 years of age. Temperature running up to 105°, responding to cleansing solutions in the uterus, then rising again in a few hours. He was loth to do a hysterectomy unless there was a streptococcic or staphylococcic abscess in the body of the uterus, as shown by the bogginess. Patient is now on the road to recovery without removal of uterus, ovaries or tubes. He advocated re-

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moval only in cases of true sepsis; in in all other cases the inflammation should be controlled by the use of ice until nature has walled off the process.

Dr. Louis Frank expressed himself in accord with the last speaker and thought the fewest number of cases called for sacrifice of the uterus. Only in cases where the body of the uterus has become infected and removal is necessary to save the life of the woman should hysterectomy be performed and ordinary infection through absorption does not render it justifiable. When septicemia is present removal of the uterus would do no good, since the trouble is already in the blood current; and so with pyemia and metastatic abscesses. He had performed the operation but once and had seen two other cases where it should have been done.

Dr. Wathen insisted that hysterectomy was the only rational treatment in this case. The uterus was three times its normal size and the septic condition had involved its walls. His method in these cases is to curette, wash out and possibly tampon; then to make an opening into Douglas' pouch and examine the uterus thoroughly. He had found the ovaries and tubes in this case totally destroyed. He could not see the benefit of leaving a badly diseased womb when the ovaries and tubes had to be removed. Hysterectomy really lessens the danger of the operation.

THE TIME OF THE OPERATION IN PRIMARY APPENDICITIS.

The surgical paper was read by Dr. W. H. Wathen, who discussed the time of the operation in primary appendicitis. He advocated that every case of appendicitis should be operated upon before the disease has extended beyond the appendix itself, unless there are reasons contradicting any capital operation. He called attention to the similarity of tissue between the appendix and the ileum and the development of lymphoid tissue in both regions in young persons. This accounts for the fact that appendicitis and typhoid fever are less frequent in the aged. The appendix becomes more frequently inflamed than does the ileum in typhoid fever because of the increased blood supply and lack of drainage. The presence of germs in the appendix does not result in appendicitis unless there is something which impairs the normal condition, and so long as drainage is not impaired only a mild catarrhal inflammation will result. When obstruction takes place operation may be imperative within twenty-four hours.

It is impossible to determine the exact degree of stricture in the appendix, but even though appendicitis may not be positively diagnosticated, the experienced surgeon can tell whether there is some condition present in the appendix or elsewhere requiring operation. Even though absolute error should occasionally be made, the operation itself is not dangerous, and the patient is safer with the appendix removed. Many cases will recover without operation, but they are likely to recur, just as in constricted urethra, and neglect in either case leads to serious results. The essayist rejected the theory that operation in the interval is to be preferred, for there is no way of determining whether the patient will live through the attack. There is no medical treatment for appendicitis; purgation, food and opiates are contraindicated. If operated upon early, convalescence is rapid, while those neglected make tedious recoveries if they survive. Most of these cases are seen first by the general practitioner, and many lives may be saved by promptly calling an experienced surgeon in consultation.

The speaker emphasizes the fact that amelioration of the symptoms does not contraindicate operation, since the destructive process may continue under apparently favorable conditions. It was shown by Dr. Abbe, at Saratoga, that when inflammation attacks the appendix, it becomes strictured in one or more places, though the inflammation be only catarrhal.

[CONTINUED NEXT MONTH.]

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Louisville Monthly Journal

OF MEDICINE AND SURGERY.

"Alis Volat Propriis."

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EDITORIAL STAFF.

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A. M. CARTLEDGE, M.D.
H. HORACE GRANT, A.M., M.D., BUSINESS EDITOR.
HENRY ENOS TULEY, A.B., M.D., ACTING EDITOR.

ONE HUNDRED CASES OF APPENDICITIS.

In the May issue of this journal Dr. Ap Morgan Vance made a report of 100 cases of appendicitis upon which he had operated and especially noted the following facts:

"The average age of the patient was 25 years. In 85 per cent. of the cases the appendix was gangrenous. In ten of the remaining fifteen it was either perforated or contained pus. Five cases were complicated with general peritonitis. One case was operated upon in the interval, upon another man's diagnosis; not much evidence of disease found. In 95 per cent. drainage was used. So far as known, 4 hernias followed in 78 cases recovering; 22 deaths, 10 of these had suppression of the urine. In 94 per cent. the appendix was removed."

In his last 23 cases Dr. Vance lost but one.

A little study of these statistics—which are somewhat marred by typographical errors in the original report—will show that under the described conditions the mortality was lower than was to be expected. Nor is it easy here to explain from the details how an expectant plan of treatment would have promised improvement. Eighty-five cases presented gangrene of the appendix, which indeed in all but five of the series was either sloughing or perforated or contained pus. It is such a finding on opening the abdomen which leads to the comment, "It is well this case was operated, else death was inevitable."

Deaver, in his reply to Ochsner, maintained that the appendicitis of Chicago must be less virulent than that of Philadelphia, since the pathology of his cases showed the expectant treatment impracticable. Dr. Vance's experience indicates a similar unusual run of cases. But Deaver and Vance base their conclusions, as they say, on facts. Are they not, however, confronted by other and even more momentous facts? Deaver's mortality, as reported at Saratoga, was 15.3 per cent., Vance's is 22 per cent., while that of Ochsner is 4 per cent. No one will claim this is due to different skill in operating. Undoubtedly it indicates either less virulence in Ochsner's cases, or else that a better time was selected for the operation.

The latter conclusion is almost unavoidable, as the observation of nearly all practitioners, surgeons as well as physicians, indicates that 80 per cent. of all primary cases will recover from the attack if let alone, and these cases, if operated on in the interval, give a mortality of about 2 per cent. Dr. Vance wisely says that the hour at which the disease is recognized is not always an assurance of either its previous duration or its virulence. But it is unquestionably a valuable guide to both, in the judgment of the experienced surgeon, and accumulating testimony of operators indicates this guide to be the key-note of

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conservatism. Hence, though we are prepared to believe that no one could have operated on Dr. Vance's or Dr. Deaver's cases and rescued a larger proportion, we are forced to believe a greater per cent. would have recovered under the expectant plan, applied to the extreme cases—the cases which gave the mortality. Nor can we overcome the conviction that when the profession is so educated as to call the surgeon in the first few hours to appendicitis (at the time extirpation is nearly always to be urged); that when the surgeon learns to withhold the knife in quiescent or subsiding peritonitis from an infected appendix, which nature is taking care of, and that when the public realizes that no case of appendicitis is cured until the useless relic is removed, thus establishing the interval operation; then will this very common and dangerous emergency be largely shorn of its terrors.

RING WORM.

"Ringworm, like the poor, we have always with us," says Jackson (*Medical Record*) in an interesting article upon the treatment of this condition.

But few conditions are so resistant as ringworm; but few are so dreaded in institutions and asylums where children are cared for. Unremitting care and most faithful treatment may result in a cure after six months or a year.

Jackson recommends goose grease as an excipient, to an ounce of which a dram of iodine is added. This is applied twice daily until a reaction has been obtained, evidenced by a swelling of the patch, then once a day. Shortly the hair drops out leaving a bald spot. No epilation is necessary. The hair soon begins to grow and the patch is well.

GASTRO-INTESTINAL DISEASES IN INFANCY.

The season is upon us when the startling mortality among infants occurs from preventable gastro-intestinal derangements. The season thus far has been most favorable, but even though 1903 were a repetition of last summer, many cases will occur which will swell the mortality list of our large cities, when many could have been saved had intelligent prophylaxis and treatment been instituted.

The article by Kerley, (*New York Medical Journal*, June 6, '03), is most timely, and should have wide reading. It emphasizes a number of facts which are indisputable in both prophylaxis and treatment of this scourge of our infant population. To think of the mortality among infants from intestinal troubles in New York alone being between 4,500 and 5,000 annually, is appalling! Kerley claims that 75 % of these children die needlessly. As prime requisites he mentions: Safe milk, free or at a price within the reach of all. 2. A supply of ice wherever there is a baby. 3. Cleanliness of the feeding apparatus, and a missionary service whereby mothers may be taught these principles.

In the treatment his experience has established a number of facts—the most important feature is a *change of diet*, a substitute of a carbohydrate food for the milk food; the giving of a purgative, calomel if there is much vomiting, oil in two-dram doses if it can be

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retained; the return to milk, *slowly* and *cautiously*; but few drugs are indicated, bismuth subnitrate in large doses, ten or twenty grains every hour, with sulphur, if the black sulphide reaction does not occur; opium, rarely, and but for a positive indication and not in combination with other medicines; irrigation of the stomach and bowels, saline solution preferred, but only when indicated and not overdone; sponging for fever and restlessness.

Reports from clinicians and pediatrists all over the country prove the contention that the substitution of a cereal gruel for a milk food at the first onset of diarrhea is absolutely indicated, and a not too speedy return to milk is a most important part of the treatment.

ANESTHESIA.

A very interesting symposium on Anesthesia was read at the March 25 meeting of the Philadelphia County Medical Society:

Davis states the choice of an anesthetic is largely one of custom and environment, though it should be our duty to select that one which is best for the case in hand and avoid the use of any single one.

He called attention to the new anesthetic brought out by Dr. Willy Meyer, of New York, which he has named *anesthol*. This is a mixture of 43.25 % chloroform, with 56.75 % ether, a chemical compound or molecular solution resulting. It is administered by the drop method on an Esmarch's inhaler.

He would use ether in children when the patient is more or less in the sitting position, and in cases where shock is liable to be a factor, and in fatty heart. Chloroform is to be used in the very old, in whom bronchitis may be a factor, in lung troubles, atheroma, alcoholics and in surgery of brain, mouth and throat.

Clark spoke of the Preparation of Patients for Anesthesia, and dwelt upon the necessity for preliminary preparation of the anesthetist for his duties as being of more importance than the preparation of the patient. He advised close scrutiny of the character of the urine, physical competency of the heart and lungs, the state of the blood and the functional activity of the alimentary tract.

Among the Complications Arising During Anesthesia mentioned by Spencer were those arising from the anesthetist dividing his attention during the administration; vomiting and gagging, frequently controlled by pushing the anesthetic; "forgetting to breathe" after the patient has passed through the exciting stage; fixation of the muscles of mastication; thick, tenacious mucus, causing cyanosis; dropping back of the tongue after relaxation; hiccough; profuse perspiration; shock.

Martin read upon the Methods of Administration of Anesthetics, advocated as prime requisites a pure drug and an experienced anesthetist; an original package of ether; Allis inhaler for ether is recommended. He precedes the administration by spraying the throat with a 2 % solution of cocaine in adrenalin chloride; gradual administration, head extension for lifting the epiglottis and tongue base from the posterior pharyngeal wall. He advises against the use of strychnia.

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DEATH OF DR. LOVE.

Just as this journal is going to press the sad news comes that Dr. Love is dead. The suddenness of this prevents the writer from attempting to put on paper his thoughts. Dr. Love was near and dear to him, and the news of his death is a source of great sorrow. It is not an exaggeration to say that Dr. Love was the best known medical man in the United States. Had a meeting been called in this or any other city in the union, the number of friends that would have responded to honor his memory would have filled a good-sized room. No man could be greater missed and none will be more sincerely mourned. In the next issue of the JOURNAL a more extended notice will given. All we can now say is, poor Love is dead! J. M. M.

"THE CHRISTIAN HOSPITAL, CHICAGO."

The "Christian Hospital" promoters are in the clutches of the law, and the profession throughout the country, which has been deluged with its literature, will rejoice at the promptness with which Dr. John B. Murphy, the principal sufferer, has been able to bring them to justice.

As an example of pure, unadulterated "gall," effrontery and "professional depravity" this scheme of advertising and easy money making beats anything we have ever heard of.

The Chicago Medical Society began collecting evidence against the promoters of this scheme to dispose of "memberships" at $25 each, for which a "beautifully engrossed certificate which imparts confidence to patients" or a "button" for a lesser sum. This has resulted in the arrest of the promoter, N. News Wood, by the federal authorities for fraudulent use of the mails.

The experience of the same promoters in the exploitation of the "St. Luke's Hospital," of Niles, Mich., and this present difficulty should be a warning to all in the future who promote such schemes, and to the *gullable* of the profession who subscribe to such questionable procedures, to make money fast at the expense of patients, and a *reputation* in the shape of an engrossed certificate and a button for a few dollars.

COUNTY MEDICAL SOCIETIES.

It is our purpose to establish a department of County Medical Societies in the JOURNAL, and each secretary of such society is cordially invited to act as the JOURNAL's correspondent, sending us such notes of the members as will prove of interest to the profession of the State, abstracts of proceedings, original papers read and voted for publication, etc., etc.

Notes received as late as the 10th of the month will receive insertion in the next issue.

The Caldwell County Medical Society, Dr. R. Woods Ogilvie, secretary, will hold its next regular meeting at Princeton, July 7. Sixteen members are enrolled.

Notes.

DR. C. NORTON MOURNING will remove from this city to Oklahoma to practice medicine.

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The fourth Pan-American Medical Congress will be held in Buenos Ayres in 1905, being postponed from April, 1903, upon request of the Argentine Republic.

Dr. Andrew E. Cone was married to Miss Susie Berry at Portland, Ark., June 3, 1903. Dr. Cone graduated from the Louisville Medical College in the spring of 1898.

Dr. John Young Brown, of St. Louis, Mo., assumed charge of the City Hospital of that city May 13 as Superintendent and Surgeon in charge.

Attention is called to the new arrangement of the cover page of this issue of the Journal. The advantages of this are obvious, enabling a subscriber to see at a glance whether any of the original articles are of interest to him.

Dr. F. W. Ruby, aged 37 years, died at his residence, 825 East Breckinridge street, this city, of tuberculosis, June 7. He was graduated in 1886 from the University of Louisville, Medical Department. He enjoyed a large practice in the eastern part of the city. His illness was of short duration. He is survived by a wife and one child.

The following physicians are using automobiles in their practice with satisfaction: Drs. Jas. B. Bullitt, T. L. Butler, J. W. Irwin, J. Garland Sherrill, T. C. Thum, C. Skinner, R. W. Bryan, F. W. Koehler, F. W. Samuel, Alex. Nettleroth, J. Hunter Peake, Geo. Croft.

Dr. Cuthbert Thompson, of Anchorage, was recently the defendant in a suit for $10,000 damages brought by a former patient who had sustained a Colles fracture of the left forearm twenty-two months before. The facts brought out in the trial showed that Dr. Thompson had treated her before for fracture of a rib; that Drs. Roberts and Dugan had examined the injured member and pronounced the result good. These facts were denied by the plaintiff under oath. The verdict in favor of Dr. Thompson was unanimous.

The practice of bringing damage suits by attorneys where there is not a semblance of ground for damage is entirely too prevalent and should be discountenanced by the right thinking members of the bar. Every community has a few "jack-leg lawyers" who seek these cases out and persuade patients with no grievance at all that just cause exists for damages, and a damage suit is the result. Louisville has four or five attorneys who are known to thrive on these cases.

The *Philadelphia Medical Journal*, with the June 13 issue (Vol. XI., No. 24), passes into the hands of the *New York Medical Journal*, with which it has been consolidated, "the reasons for the change being entirely administrative." It is announced that "an editorial office will be maintained in Philadelphia, and the consolidated journal will continue a vigorous editorial and business connection with that city." An open letter from Dr. Lloyd, the late editor, states the demise of the *Journal* was due to conflicting interests among the stockholders. The majority of the stock held by laymen was voted to devote space to advertising in the reading matter. The medical officers and stockholders resigned, and its sale is the result.

The Publication Committee of the Kentucky State Medical Association has determined upon the issuance of a Bulletin, in lieu of the annual volume of transactions which of late have been delivered to the members a week or so before the next regular meeting.

The present number of the Bulletin contains thirty-two pages of reading matter, the minutes of the Association and of the House of Delegates, the Ad-

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dress of the President and the Orations in Medicine and Surgery.

The Committee publishes an Editorial Salutatory, which is the explanation for the existence of the publication. It would have been well for the Bulletin to have been given an editorial staff head containing the names of those responsible for its issuance. The average reader will not think to look on the first cover page to learn the personnel of the committee.

The advantages of a bulletin over our tardy and useless volume of transactions cannot be gainsaid, and we trust it will be well received throughout the State.

The State Board of Health at its June meeting passed rules governing applicants for license to practice in the State.

It will require each applicant for license, graduating on and after July 15, 1903, to make affidavit of compliance to its rules. These rules require that he shall have paid the full tuition as advertised by the catalogue of the school from which he graduated; that he fulfilled the entrance requirements, and was present throughout the entire term; that he has presented on matriculation evidences of a good, moral character; that he was not the recipient of a scholarship except those provided under the laws of the State or of an endowed university; that he shall not have given a note in payment or part payment of his fees or accepted a rebate; that all fees shall have been paid before the degree was given.

The Ohio Valley Medical Association met June 11 and 12 at Henderson, Ky.

Important legislation was transacted, extending the bounds of this Association over the four States bordering on the Ohio river, viz.: Ohio, Indiana, Illinois and Kentucky, and the meetings from now on are to be held annually in the fall.

This Association is rapidly growing, and has members not only scattered over the territory within the bounds of the four States, but Tennessee and Missouri as well, and with the present legislation extending its bounds so as to encourage growth, it is destined at no distant day to be one of the most important medical societies in the United States.

Evansville, Ind., was selected as the next place of meeting, and the Association hopes to make this the best meeting of the five years of its history. No date was set for the fall meeting, but will be determined by the Committee of Arrangements so as not to conflict with the "Mississippi Valley" or "Southern Surgical and Gynecological Association" meeting.

Benj. L. W. Floyd, of Evansville, Ind., was elected President; W. J. Stone, of Henderson, Ky., Vice-President, and A. J. Lieber, of Henderson, Ky., was continued as Secretary and Treasurer.

Book Reviews.

Questions and Answers Upon Diseases of the Gastro-Intestinal Tract.

By Thomas Hunt Stucky, A.M., M.D., Professor of Theory and Practice of Medicine and Clinical Medicine. Hospital College of Medicine. Caxton Publishing Co. Louisville, Ky.

This little manual is full of pertinent and comprehensive suggestions on the diagnosis and treatment of diseases of the intestinal tract, and these suggestions are so arranged and presented as to convey much valuable information in a few lines. Though a good part of the subject matter is to be found elsewhere in standard textbooks there is much original suggestion of the author's own method of treatment, and all collected under appropriate headings and grouped with relation to the several organs involved. The indications from the tongue, the significances of the common symptoms indicating diseases of the stomach, intestines, kidneys and liver are so pre-

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sented as to direct attention of the investigator in the right line. The management of test meals, irrigation of the stomach, colon douching and examination of the blood are described in so succinct, but explicit manner as to be alone well worth the price of the book. The tables of differential diagnosis and the points concerning temperature and the nervous symptoms, including gastric lavage, are pregnant with practical worth. This little book is indeed a "Multum in parvo." Useful as well to the practitioner as the student.

Progressive Medicine. Volume II. June. 1903.

Edited by Hobart Armory Hare, M.D., Professor of Therapeutics and Materia Medica in Jefferson Medical College of Philadelphia, assisted by H. R. M. Landis, M.D., Assistant Physician to the Out-Patient Department of the Jefferson Medical College Hospital, Philadelphia. Philadelphia and New York. Lea Bros. & Co. 1903.

The subjects considered in this volume are Surgery of the Abdomen, including Hernia, Gynecology, Diseases of the Blood and Ductless Glands, The Hemorrhagic Diseases, Metabolic Diseases and Ophthalmology.

The contributors are Drs. John G. Clark, Wm. B. Coley, Edward Jackson and Alfred Stengel. This series needs no introduction to the profession. It is a most excellent resume of the work in these lines.

Bacteriology. A Manual for Students and Practitioners.

By Fred C. Zapffe, M.D., Professor of Pathology and Bacteriology in the Illinois Medical College; Professor of Histology in the Department of Medicine in the School of Dentistry of the University of Illinois, Chicago. Series edited by Ben B. Gallaudet, M.D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, New York, etc. Illustrated with 146 engravings and 7 colored plates. Philadelphia and New York. Lea Bros. & Co. 1903.

This is the latest of Lea's Series of Pocket Text-Books, and is a most thorough and practical little book. It is a book which has been written and arranged for the needs both of the student and practitioner, eliminating unnecessary scientific discussion.

Bacteriology is essentially a practical study, necessitating much detail work in its study. This detail is thoroughly considered by the author, each chapter following in succession the work of the student as given by the author in his class work.

The labor of thus condensing and arranging a book to satisfy the demands of its users is, indeed, very great; the result is either a finished and useful book or a failure. Dr. Zapffe's book will certainly meet with a ready and wide circulation.

A Text-Book of Medicine and Toxicology.

Edited by Frederick Peterson, M.D., Chief of Clinic, Nervous Department of the College of Physicians and Surgeons, New York; and Walter S. Haines, M.D., Professor of Chemistry, Pharmacy and Toxicology, Rush Medical College, in affiliation with the University of Chicago. Two imperial octavo volumes of about 750 pages each, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Co., 1903. Per volume: Cloth, $5.00 net; Sheep or Half Morocco, $6.00 net.

The contributors to volume I are the following well-known writers: S. T. Armstrong, Pearce Bailey, Lewis Balch, Charles G. Chaddock, John C. DaCosta, J. T. Eskridge, James Ewing, Walter T. Haines, Joseph N. Hall, G. M. Hammond, Ludwig Hectoer, Edward Jackson, Smith E. Jelliffe, T. W. Langdon, Frederick Peterson, Allen J. Smith.

Part I being devoted to expert evidence, medico-legal examinations, death from various causes of a medico-legal nature, and medical jurisprudence questions, inebriety, insanity, mental defects. Part II will consider Toxicology and other portions of legal medicine in which laboratory investigation is an essential feature.

The chapter on expert evidence is worth the price of the book, being as succinct and practical as any we have seen, occupying but eight pages.

The description of the several systems of identification is thorough and complete, and an important chapter is that on the medico-legal relations of the X-rays. The book is exhaustive and most thorough in every detail.

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DIGITALIS.

BY JOHN G. CECIL, M.D.,
LOUISVILLE, KY.

Digitalis has been much used and much abused. That it is a therapeutic agent of wide application and power and usefulness is beyond question. When properly exhibited it may generally be regarded as reliable, although at times, even when the therapeutic indication is apparently plain, it is sadly disappointing. Mistrust as to the efficiency of digitalis arises from different causes. In the first place there is great variation in the pharmaceutical official preparations; this is particularly true of the alkaloidal extracts, or, more correctly speaking, the glucosides. Again, failure to secure uniform and efficacious action arises often from the fact that the preparations are carelessly and improperly made. Few, if any, of these preparations are stable, and consequently when kept too long they lose their power, and, of course, uncertainty in action is the result. Even the active principles of digitalis lose their power after a comparatively short time. All preparations should be made from the freshly gathered dried leaves; when tinctures and infusions are made from stale leaves the reason for uncertainty in action is obvious. Of all preparations the official tincture of digitalis is probably the most stable. Of all preparations the infusion, when correctly made both as to the time necessary to make it and as to the power, strength and freshness of the raw materials used, is the most reliable and efficient as to therapeutic results. Again, failure to secure desired results from digitalis arises not infrequently from misconception as to its physiological action and compound parts. A great deal of confusion exists as to the value of the active principle or principles. Even the chemists and laboratory experimenters in physiology are at wide variance with each other as to the true character of these principles. According to Arnold & Wood (*Amer. Jour. Med. Sciences*, August, 1900), digitalin, digitalein, digitonin, digitin and digitoxin are the recognized proximate principles found in digitalis—the first four are glucosides. Digitoxin, according to Schmiedeberg, is not a glucoside. According to H. C. Wood (*Prin. and Prac. Therapeutics*) there are in the leaves of digitalis the following ultimate active principles: Digitalinum verum, digitalein, digitoxin and digitonin. He adds, further: "It is practically certain that there are several active principles, some of them closely allied in their physiological action as well as the chemical relations, each probably representing to a greater or less extent the pharmacological properties of digitalis. The complication arising from the difficulty of the chemical recognition of these substances has been greatly increased by the improper use of the word 'digitalin.' There are at least four different substances on the market to-day known as digitalin, only

*Read before the Louisville Medico-Chirurgical Society, May 1, 1903.

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one of which is probably a pure ultimate principle."

This same difference of opinion runs through the writings of different authors, and the more one reads the more certain is he to have his confusion worse confounded. It is certain that some of these principles represent in some degree the action of the drug, but to get full therapeutic action of digitalis, the preparations of the crude drug are most reliable and uniform. A good infusion made of fresh dried leaves of the second year's growth represents about all that can be obtained from the drug, and represents all that can be obtained from a combination of all the different principles. For hypodermic use the digitalium verum of Kiliani is probably the most reliable and least objectionable.

As to the physiological action of digitalis locally it is a feeble irritant, generally causing nausea and vomiting after continued use, though part of this action is probably due to irritation of the brain centers. This arises when the active principles are given subcutaneously. When used hypodermically, digitalin verum seldom causes local irritation, but digitoxin is often followed by abscess.

The action of digitalis on the central nervous system is of minor importance, and may be in this connection ignored. It must not be forgotten that digitalis is absorbed slowly from the intestinal tract and with some irregularity, hours usually and sometimes days elapse before the full effects are seen from doses taken by the mouth. This renders it uncertain and often useless in emergencies or when prompt action is desired. It is also eliminated slowly, and to this may be attributed the tendency to cumulative action which at times is alarming and dangerous.

The dominant action of digitalis is upon the circulation—the heart and blood vessels. Systole is strengthened and diastole is lengthened; arterial tension is raised. Cushing divides the action of digitalis into three stages—the first or therapeutic stage, the second or stage of excessive inhibitory activity, and the third or poisonous stage. The first or third stages are always developed when sufficient quantities are administered. In the first stage the rhythm of the heart is slower than before giving the drug, and the slowing is due to a prolongation of the pause in diastole, which is attributable to inhibitory activity. The ventricles in this stage empty themselves more completely than they normally do. This increased action of the ventricle is probably due to action on the cardiac muscle. If the heart is weak and dilated digitalis tends to lessen the dilatation of the ventricles; if the heart is normal digitalis increases the dilatation. The variation in the degree of the dilatation of the ventricle depends upon the opposing factors—the inhibition and the muscular action. If the inhibition is the stronger the ventricle relaxes more completely than before; if the muscular action predominates relaxation is lessened. The action of digitalis upon the auricles in the first stage is practically the same as upon the ventricles.

In the second stage the symptoms indicate a grave condition of poisoning and are not seen in the therapeutic use of digitalis. These symptoms are due to excessive inhibitory activity, the direct cardiac action being less developed. "The rhythm of the ventricle, and consequently of the pulse, is very slow and irregular, as is always the case when the inhibitory apparatus is strongly stimulated. During diastole the ventricle dilates more completely than usual, while its systole varies in strength. If the muscular action is well developed it continues to empty itself more completely than usual; but very often the inhibition is so powerful that muscular action is entirely concealed and the systole is weaker and more blood remains at the end of the contraction than before the drug was administered. As a general rule, however, each beat expels more blood than normally, because the heart is en-

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gorged before systole begins; but the rhythm is so slow that the output per minute and the efficiency of the heart as a pump is less than usual. This is the feature which differentiates the first from the second stage, in which the same factors are present in the first stage the amount of blood expelled per minute is greater, in the second stage less, than before the administration of the drug." Therapeutic doses of the drug never induce irregularity in themselves, though the pulse is often irregular from disease in cases in which it is prescribed. When such irregularity develops in actual practice from therapeutic use of the drug, the second stage is being induced, the dose should be at once reduced, for the efficiency of the heart is less than it would be without the drug.

"In the third stage the ventricular rhythm becomes very much accelerated, often beyond the normal, and even beyond that seen after paralysis of the inhibitory nerves. This acceleration has often been supposed to be produced by paralysis of the vagus, but this is not correct—it is really due to the drug increasing the irritability of the heart muscle to such an extent that the inhibitory apparatus is no longer able to hold it in check."

The auricles in this stage are often later in being accelerated than the ventricles, because the inhibitory nerves act more strongly on them. This results in auriculo-ventricular arrythmia; the next step will be asystole of either auricle or ventricle, then other irregularities will appear, and finally delirium cordis, circulation is arrested, after which the heart dilates to an extreme degree. All the features of the third stage are due to the poison increasing the irritability of the heart muscle.

"Digitalis influences the *peripheral vessels* in several different ways. In the first place, the vaso-constrictor center is stimulated to a marked extent, and the peripheral vessels are therefore contracted through nervous influences. The heart in the earlier stages expels more blood than normally and at higher pressure, and this, of course, involves higher pressure in the aorta. Besides these two indirect influences on the blood pressure the vessels are acted on directly, the muscular coat being thrown into a condition of abnormal activity, and the calibre is therefore narrowed. It is by these three influences that the arterial tension is raised."

Digitalis was first introduced into medicine by Withering as a diuretic. It slightly increases the renal secretion in health, but not anything in comparison to the increase seen in disease. The diuretic action is due to the cardiac action of the drug, which results in acceleration of the blood current through the renal vessels. To enter upon a general discussion as to the therapeutic indications and contra-indications would unduly prolong this paper. This feature of the subject will be left to the discussion.

DISCUSSION.

Dr. H. A. Cottell: I am sorry that the essayist did not go into the part he has left for discussion. It is an admirable paper and leaves very little to be said as to the physiological action of the the drug. It is important that general practitioners, and particularly young and inexperienced men, should know the indications and contra-indications for the use of digitalis, for a great deal of harm arises from its ignorant use. I have seen patients almost in a condition of asystole from it use, and one or two in an extremely ugly condition, on the very verge of death, from its prolonged administration. That was brought to my attention five or six years ago, when I was called into consultation by a doctor of considerable experience who had been treating an old man with a weak heart, convalescing from erysipelas. When I saw him his chin had dropped and he was propped up on pillows with the worst heart I ever listened to. His pulse was not only in-

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termittent, but intermitted on the descending scale, dropping a beat, then starting again. I asked the doctor what he was giving, and he said fifteen-drop doses of the tincture of digitalis every three hours. He was also giving large doses of nux vomica and had been keeping this up for several days. I advised taking off both drugs and giving stimulants, bromide of camphor and citrate of caffeine, and nitroglycerine if necessary. I was never called back to see the case, but I frequently meet the old gentleman on the streets today. He would certainly have died before morning if the digitalis had not been taken away.

I saw an extreme case some years ago where I carelessly left a prescription of digitalis with a woman suffering from acute nephritis, a pauper case which I had neglected, and she had gone on taking ten-drop doses for a week. She had an intermittent heart and a pulse of about 40, but no other extreme condition.

The discussion of the indications for the use of digitalis is one of the most important we can have before us. My rule has always been to use digitalis on a runaway heart, a rapid heart, especially if both rapid and weak. I always watch its effect and reduce it or omit it when there is no intermittency in the pulse.

Dr. Thos. Bullock: I do not think I can add anything to the discussion. I have been out of the world so very long that I am a little diffident about speaking. The only thing I want to say is to add emphasis to the importance of medical societies. It has been absolutely impossible in that part of the world where I have been to have a medical society. Brothers in medicine know how good it is to dwell together in unity, but out there it is absolutely impossible to get a membership of over three, on account of the personal features. I have not had the pleasure of opening my head on medical subjects since I left Kentucky.

Dr. J. B. Marvin: I believe digitalis is an agent for good and an agent for evil, and in casting it up in my mind, I am rather of the opinion that it is more potent for evil than for good. Digitalis, as the essayist has told us, acts in two directions. Primarily, it increases systole and lengthens diastole; next, it raises arterial tension. I plead guilty, as every man must who speaks truthfully, to having misused digitalis. When I knew less than I do now (and I know little enough at best), I went like most men on the idea that whenever I heard anything wrong about the heart it meant organic disease, and digitalis was the remedy. Therefore, no matter what I heard, digitalis was the thing. I know better now, and possibly may have swung to the other extreme.

It seems to me that there is only one condition of the heart that we ever meet with where digitalis is indicated, and that is ruptured compensation with dilatation of the heart. In ruptured compensation, followed by cardiac dilatation, whether it be mitral, aortic or of the tricuspid valves, the indication is the same—digitalis. Prior to ruptured compensation, I do not believe there is any indication for its use. I have watched myself closely for a number of years past, and I have yet to see a single condition other than that described that I thought was benefitted by digitalis, no matter how it was given. Now, there is a limited field, but a very important one, and one that will yield such striking results that it will make a man believe in therapy, and proud of himself that he can give relief. To see a mitral regurgitation with ruptured compensation coming on, and to see digitalis steady that pulse, make it more regular and full, less feeble, less intermittent, less irregular, check the dropsy, relieve the distension, improve the nutrition, it gives one an idea of its wonderful power. But I believe the use of digitalis even in that field is limited, and that just as soon as the equilibrium is established again, that is the time to taper off and stop it quickly. It is too good an agent to be used all the time.

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Now, one or two conditions in which I think it does no good. I do not believe it does any good in pneumonia, and have so stated for a good many years in this Society. I will give my reasons. Since P., the Italian, came out with the claim that massive doses of digitalis might cut it short, I have allowed myself to give it, using neither the infusion nor the tincture, but this new preparation, Merck's German amorphous digitaline. I have not seen any good results from it.

In renal disease, I doubt its efficiency. I do not believe it has any place in nephritis, unless, as is liable to happen, the heart weakens and dilates, and then it only increases diuresis, and acts on the heart and not the kidney.

I also plead guilty to having misused it a few times in delirium tremens. In the City Hospital I have given drachm doses to a few unfortunates, and, while it did not kill them, I doubt very much if it did them any good.

One word more. I heard the original paper read on this German preparation of amorphous digitaline, and I remember bringing it up before this Society, and when I said I had given it in half-grain doses, a physician in Oregon wrote up and rebuked the Society for allowing such views to go forth. There are two of these digitaline preparations on the market. One is a French preparation, and the average dose is 1-60 of a grain, and it can be given hypodermatically. The other one is Merck's, the dose may be increased to two grains. I have tried it hypodermatically a few times, and it results in a great deal of distress, if not abscesses. I do not believe in torturing people when they are in the valley of the shadow of death by injecting digitalis, nitroglycerine or other drugs into them. Instead of prolonging life in our desire to do something, we misdirect our energies and only hasten the end when they are on the eve of dissolution. In shock and collapse, hypodermic injections of salt water are more efficacious than digitalis.

Dr. Louis Frank: I have seen digitaline used in combination with strychnia after operations.

Dr. Marvin: How could any benefit come from the digitalis?

Dr. Frank: In toxic conditions, by its action on the heart.

Dr. Marvin: How do you know that?

Dr. Frank: I have seen them get well.

Dr. Marvin: So far as the normal heart is concerned, digitalis has little, if any, effect on it. I believe that in certain cases of myocarditis we used to teach that digitalis was contra-indicated. I always feel my way along, irrespective of any fancied myocarditis that may be there. If digitalis would act quickly we could manage it better, but I may give you digitalis to-day and it may not have any effect on you for three or four days, and you may have lost valuable time, and whatever good is done comes from what is given in combination with it. You may get the poisonous action if it is not absorbed speedily and eliminated. That is another element of uncertainty.

Dr. Louis Frank: I have a patient now who developed an irregular pulse on the second day after operation. It was very rapid. After purgation the temperature came down, but the pulse continued irregular. Digitaline was administered and the pulse came down, became steady, and the case improved in every way.

Dr. J. B. Marvin: Your patient might have done just as well without it. Digitalis may give a very slow pulse, and may cause head symptoms. No doctor who has ever seen a condition like I have described will dispute what I said, that it is the most valuable stimulant and life saver we have when there is dilatation of the heart with ruptured compensation, whether it be of the mitral, aortic or tricuspid valves.

In this condition, I believe we can claim with digitalis we are standing on solid rock, but in nearly all other conditions I am disposed to regard the

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claims of digitalis as founded on sinking sand.

Dr. F. C. Wilson: Digitalis is certainly one of our most valuable agents in dealing with the heart, and the best guide is the rapidity of the heart's action, taking into consideration the surroundings of the heart and the fact whether compensation is lost or not. We know the danger to the integrity of the heart that follows this rapid action, shortens diastole, and which lessens the opportunity for repairing the wear and tear of the heart muscle. Just there digitalis comes in and compels the heart to slow up, and this gives opportunity for repair of the damage already done. The best criterion as to whether we are doing good or not is its effect upon the action of the kidneys. As long as the kidneys do not show the beneficial effects of digitalis, we can be sure we are not doing good, and possibly doing harm. By taking the kidneys as a guide, we can always make our use of digitalis safe.

I have in times past given digitalis in immense doses. We all know its use in delirium tremens in heroic doses. I remember at one time giving a tablespoonful of the mixture, followed by a dessertspoonful, followed by a teaspoonful, followed by relief. I remember the druggist was terribly frightened, and would not write out the directions, and when I told him I was waiting there to give it, he wrote the name of the drug without the directions. I gave it myself and watched its action. It did not produce death, and I am sure I saw benefit from it.

Just as soon as the pulse comes down I diminish my dose, or cut it off entirely. I have rarely ever been disappointed in its use where I have had a reliable preparation, and this is one of the cases where I think the physician is justified in sending his prescription to a particular druggist. In the use of the infusion, which is one of the most reliable preparations we have, I have often been disappointed, and upon inquiry found that it came back from the drug-store within half an hour, when a good infusion cannot be made within less than two hours. I have always been in the habit of questioning the patients on this point, for the druggists so often make the infusion from the fluid extract, and this will always disappoint. The infusion made from fresh stock will rarely disappoint.

Dr. Wm. Bailey: I could say a great deal about digitalis that I do not know. In the first place, the difficulty is that we have in the drug a combination of active principles that may not always be in proper relative proportions. I believe it is proper, in the use of the drug, to get the separate principles, if possible, and use them alone so as to eliminate the uncertainty that comes from the use of the crude drug. This uncertainty is true of most drugs where we have more than one active principle and they vary in different specimens of the same drug. Hence it is necessary that our preparations be made from the drug secured in the proper manner, the second year's growth, and properly cared for. For two or three years I have been inclined to confine myself to digitalinum verum and to the infusion. I rarely give the tincture or the fluid extract, the physilogical action of which was well described in the paper.

With me the indication for its use is a rapid pulse with low tension. As Dr. Marvin says, I believe that in certain conditions we have nothing to equal it. I believe it is a drug we should not leave with the patient for any great length of time without observation as to its effects. I think in many conditions its continuance must be determined solely by its influence on the circulation. One of the difficulties in the use of the drug is its slow or defective elimination, and continuous use might result in a cumulation. If we represent its power by numbers and give 20 at a dose and only 10 be eliminated during the interval, we have 30 at the next administration; and if only 10 be eliminated in the next interval, at the third dose we will have 40, and this accounts for the cumulative

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effect. I think we should watch its effects closely. With an organic valvular trouble, particularly of the mitral valve, that has either failed to get compensation by hypertrophy or lost it by dilatation, I do not think there is any drug comparable to digitalis. But even in this case we may not get the anticipated results and harm may come unexpectedly. It is not proper to put patients on digitalis and allow them to go for days without seeing them. Constant attention should be had in order to determine the effect of the drug upon the heart. It should be remembered that there is a great deal more in feeling the pulse than merely counting numbers. The character and tension of the pulse are as important as the pulsation itself.

I have seen the most remarkable effect for good from the drug that I have ever seen from anything. Cautiously administered, it has been my fortune never to see distressing results, and I am not prepared to go to the extent of my friend Dr. Marvin in its rejection. But the clearest indication for its use is a rapid, feeble pulse with a low tension. I am sure that I would embrace regurgitation at the aortic valve as a safe condition for its use. Prolongation of diastole and allowing the aorta to force the blood back into the left ventricle at the same time that it is coming from the left auricle might strain the ventricle until there would be danger along that line from over distension.

I think the effect on the kidney is sometimes exceedingly good. If not, then it is an unsafe remedy to use. Unless there is improved elimination by the kidney, I am fearful of the drug. If you get increased elimination of urine, there is not much danger in it and a great deal of good. Of all the drugs that I know, it is the best, and yet it is one that must be guarded closely, watching its influence on the circulation and secretion.

I am sure that in cases of true delirium tremens large doses are safe. I would give very much beyond the ordinary dose. In true delirium tremens we have great debility, and they usually have gone on without taking food for days. Delirium tremens is a very different condition from a debauch. While the man is drunk and taking his stimulants, he would not be benefitted by it, but in that depressed condition where vitality is diminished and the vital forces exhausted, digitalis is of service. But in mania a potu it is contra-indicated, and I think in watching these conditions, the difference as to the frequency and force of the heart and the condition of the capillaries must be our guide. I think digitalinum verum is less dangerous than any other derivatives that come from the drug.

Dr. J. B. Marvin: In what I said about aortic regurgitation I emphasized the point that compensation must be ruptured. Of course, we might have a hypertrophied heart, and digitalis in that stage would not be indicated, unless ruptured compensation had occurred. I could never see any good of digitalis in Graves' disease or tachycardia, where we have a rapid pulse, but not dependent upon organic lesion.

Dr. J. G. Cecil: I am glad the members have discussed the indications for digitalis, because I did not have time for that part of the subject. I think it is generally conceded that up to the present time we have no proximate or ultimate principle of the many that have been isolated, that represents the crude drug in all of its action, as we do with other drugs. Strychnia represents practically all the virtues of nux vomica and atropia of belladonna. But none of the various digitalins represent the full power of digitalis, and for that reason I have lost faith in all of them and confine myself almost entirely to the use of the tincture and infusion of digitalis. I am satisfied, with Dr. Marvin and other speakers, that digitalis has been a very much abused drug. Making the discovery of a simple heart murmur an indication for the use of this drug is very unscientific, to say the least. My belief is that the primary

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and chief indication from which we get the most beautiful effects is a crippled heart, with or without a valvular lesion, with interrupted compensation.

While I do not depend upon digitalis absolutely as a diuretic, I think it has a very useful place in interrupted renal secretion, even though that disturbance be not associated with heart disease. I believe, however, that the best indication for the use of digitalis as a diuretic is when we find passive congestion of the kidney due to defective action of the heart. For a long time it was used only as a diuretic, but when good results were secured, in most cases it was where there was defective action of the heart, which was responsible for defective kidney action.

In acute diseases, such as diphtheria and scarlet fever, where we have cloudy swelling and defective elimination on the part of the kidney, where of course there is an effect on the heart, though not broken compensation, I have seen very beautiful effects from the use of digitalis as a diuretic.

I find myself using digitalis less and less. I believe it is the best drug we have for the class of diseases mentioned, but outside of that I have little use for it. I find very little use for it in periods of heart depression after operation and sickness of other kinds. It is a drug powerful for good when watched, but powerful for harm when administered unscientifically.

Dr. Wm. Bailey: I would like to animadvert upon the practice of using digitalis and nitroglycerine at the same time. The influence of these stimulants upon the capillaries is so directly opposite that it does not seem to me to be scientific medication to make this combination. Yet occasionally I confess to the sin of doing so. I believe we should shoot with a rifle instead of with a shotgun. If we have a clear indication for digitalis, it is for a feeble heart with low tension. Then what good can it do to give digitalis to contract the capillaries and nitroglycerine, which is so efficient in opening the capillaries? As scientific men, we should not prescribe remedies so opposite in their action, because elimination and nutrition depend upon increased tension, and if we want to get that from the digitalis, we should not give another remedy that combats it.

CARDIAC TONICS, INDICATIONS AND CONTRA-INDICATIONS, WITH SPECIAL REFERENCE TO DIGITALIS.*

BY THOS. HUNT STUCKY, A.M., M.D.,
Professor Theory and Practice and Clinical Medicine, Hospital College of Medicine.
LOUISVILLE, KY.

1. Cardiac disease is linked with the entire system.

2. The importance of maintaining cardiac tone—a question of *nutrition*. Importance of rest, elimination and proper digestive function in order to maintain nutrition. Best tonic is the one which increases nutrition most, enabling the heart to do its duty.

3. Field for mistake lies—

(1) Improper estimate of the condition of heart muscle.

(2) Placing too much importance on murmurs.

(3) Differentiating organic from functional disease and determining underlying causes.

4. To properly select a remedy we should consider the causes which indicate use of tonics.

(1) Failure of general nutrition; children not to be pushed.

(2) Disturbed local nutrition due to disease in coronary arteries.

(3) Valvular lesions, "hemic" murmur.

(4) Functional disturbances; relieve nervous system.

(5) Improper use of Nauheim baths or exercises.

5. In applying cardiac tonics to relieve these effects.

(1) Digitalis stands first. Best cardiac tonic is the one which eliminates as well as restores nutrition.

*Read before the Jefferson County Medical Society.

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(2) Strophanthus.
(3) Spartein.
(4) Caffeine.
(5) Strychnine.
(6) Adrenalin.

The indications calling for the use of cardiac stimulation are inseparably connected with conditions which call for better elimination, increased nutrition and stimulation of the general metabolism; we should realize that cardiac action is linked with the conditions of the entire system, and the indications for treatment directed to the heart itself are more limited than is generally realized.

The quality of the heart muscle which enables it to do its work is tone. Tone we may define as that property in heart, artery or other hollow viscus which preserves the mean diameter of the part in spite of distention or contraction.

It is important to realize that were it not for tone, the heart, often subject to extravagant demands, would be strained and perhaps ruptured. As long as the tone or reserve strength of the heart muscle is preserved, an increase in the work thrust upon it, either by cardiac causes, valve lesions or inflammatory changes, or by exocardial changes in kidney, lungs, arteries or liver, will be met by stronger contraction, and this dynamical reinforcement becomes statical as hypertrophy. Were tone absolute there would be no dilatation or increase in cavity size; hypertrophy alone would take place. On the other hand, if, as in chronic strain, the tone is overborne little by little, dilatation ultimately soon surpasses hypertrophy.

Thus in the preservation of cardiac action it is a question of nutrition; if nutrition is kept up, compensatory hypertrophy will be the result of cardiac disease, while if nutrition fall below normal, dilatation inevitably results. Therefore, not only as a means of preventing fatal dilatation, not only as prophylactic, but also to restore tone, and to rehabilitate hypertrophy the restoration of cardiac nutrition is of primary importance. In the use of cardiac tonics this factor must not be forgotten, for although the dynamic force of the heart relative to the demand may be temporarily obtained, the ultimate outcome often means increased insufficiency.

There the chief field for error lies.

1. In the prognosis and treatment of valvular disease, which may be overtreated or undertreated through failure to estimate properly the condition of the heart muscle.

2. In the failure of recognition of serious lesion of the muscular structure of the heart because of absence of valvular murmurs.

3. In the failure of distinguishing between organic muscular lesions and in the realization that the latter lead to the former.

In the application of cardiac tonics we cannot accept as our guide insufficiency of the heart muscle alone, but we should consider what that disturbance is resulting from.

In the first place, failure of compensation may result from failure of general nutrition, and may be simple anemia, or result from chronic inflection diseases—gout, syphilis, diabetes, influenza and rheumatism.

2d. Disturbed local nutrition resulting from coronary sclerosis with consequent fatty and granular cardiac changes.

3d. Compensation may fail from valvular lesions, temporarily from muscular overstrain, as in overlifting, prolonged exertion, etc., or it may become permanent from renal disease, arterio sclerosis and chronic lung disease.

4th. Functional disturbances cause a disturbance in compensation indicating cardiac stimulation from reflex nerve derangements, or emotional disturbances, acting by increasing arterial tension.

Finally a ruptured compensation may result from improper application of treatment, as Naudheim baths or Swedish exercises.

To restore the heart to its normal condition then, is to find out the under-

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lying causes, to realize that we should primarily restore nutrition and remember also that rest, elimination and exercise exert as important a restorative action as the specific cardiac tonics, digitalis, strophanthus, spartein, caffeine and strychnine.

After determining the cause it is necessary to know what tonic to employ, when and how to give and when to stop. We should also remember the principles which govern the employment of the chief of cardiac tonics, digitalis, apply to a certain extent with individual exceptions to the entire group.

In the first place, the primary object being to increase nutrition, it is important to remember that this cannot take place until thorough elimination is provoked, antagonizing the exciting cause. We shall consider the application of digitalis to the causes named indicating cardiac stimulation.

Where simple anemia exists and the cardiac arythmia results from the messages sent in from the periphery for more blood, digitalis is useful, if combined with general tonic treatment, in so far as it stimulates the pneumogastric nerve and steadies the heart muscle. But where this anemia is dependent upon defective elimination as results in rheumatism, gout, etc., the indications are for the use of potassium iodide and mercury, general tonics and stimulation of the emunctories.

In the second place, where coronary sclerosis is present, or where anginal attacks have occurred, digitalis is contra-indicated. By its action these arteries are filled almost to bursting, and their rupture would be almost inevitable.

Where the cardiac insufficiency results from the third cause, muscular overexertion, simple cardiac insufficiency, digitalis is typically indicated, restoring tone, slowing the pulse and decreasing arrythmia, but during its administration the patient should be kept at absolute rest.

Where a relative insufficiency depends on increased peripheral resistance due to high arterial tension in chronic arterio-sclorosis, renal, hepatic or pulmonary disease, digitalis is contra-indicated. In those cases potassium iodide and mercury, provoking increased elimination, with the application of vaso dilators, opium and the nitrates are indicated. In fact, the condition of the liver, the kidneys and the digestive tract not only aid us in determining what cardiac tonic to use, but often their function can be so greatly improved by provoking increased elimination by purgation, diuresis, diaphoresis, by change of diet and rest, reducing auto-intoxication that the cardiac insufficiency may not need direct stimulation. This applies to many cases of seeming myocardial changes occurring during the course of infectious diseases which are relieved by thorough purgation and elimination. In regard to valvular lesions, regardless of their indications for digitalis, I believe it is contra-indicated where fatty degenerative changes have occurred and in acute myocarditis, and also in acute cardiac failure, as in shock and syncope. Digitalis is typically indicated in mitral lesions, because of its power to lengthen ventricular diastole.

I believe that in our use of digitalis, bearing these facts in mind, we may give the indications and contra-indications as follows:

1. Digitalis is contra-indicated in acute cardiac failure such as occurs in acute angina, shock and collapse because of its slowness of action. As Bartholow expresses it, "We give digitalis to-day and get results to-morrow."

2. Again, it is useless in acute inflammatory affections of the heart because of the great strain placed upon the vessel walls. In pericarditis, except temporarily.

3. In aortic diseases except when complicated by mitral regurgitation. If the pulse goes below 80, or if free diuresis does not follow its administration in these cases, it should be immediately discontinued.

Digitalis is not a suitable diuretic for

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chronic nephritis, though it is sometimes permissable in the acute forms, but is absolutely contra-indicated if associated with arterio-scleroses.

Digitalis is an uncertain diuretic at all times unless the heart is affected.

It is contra-indicated in mitral cases where ventricular contraction causes increased dilatation.

Also in fatty changes in the kidney.

In aneurism of the great vessels.

In cases of high arterial tension from fevers and septic conditions.

Whenever atheromatous changes are marked.

Digitalis should never be used unless marked venous engorgement is present; if rest, diet, general tonics, combined with elimination, produce marked amelioration of symptoms, it is contra-indicated.

The indications for its use are as follows:

In those cases of low arterial tension characterized by pulsating jugulars, cyanosed face and labored breathing, such as occurs in simple failure of compensation.

In cases associated with a rapid, easily compressible pulse with cough, cyanosis, dyspnea and edema from septic conditions.

In tricuspid stenosis it is of great service.

It is most useful in mitral regurgitation, but the less the lesion approaches the edematous type the less good digitalis will do. Sometimes the heart becomes embarrassed because of the failure of the return flow of blood to supply the left ventricle.

In mitral constriction it usually is of great assistance, giving time for more blood to pass through the opening. Its action can be materially enhanced by relieving the right heart through the liver by purging, and promoting elimination, with the maintenance of absolute rest.

In tricuspid regurgitation or constriction digitalis is especially valuable, when we have a low tension pulse cough, dyspnea and general dropsy.

In aortic regurgitation, if used before compensatory hypertrophy has occurred digitalis is indicated.

When compensation is perfect, it is generally injurious, allowing more time for the blood to regurgitate through the imperfectly closed orifice, and increasing the danger of fatal syncope.

If aortic stenosis is complicated by mitral disease, digitalis is indicated, especially when accompanied by general venous stasis and peripheral anemia. Otherwise it is injurious.

In the "irritable heart" of soldiers, and in reflex disturbances from generative tract, intestines and stomach, digitalis does good by stimulating inhibition and steadying the heart, but should always be combined with treatment directed to the underlying anemia.

Congestive conditions in the lungs, unless the temperature is very high, indicates digitalis, but when consolidation is present, as in second stage of pneumonia, it is contra-indicated.

As a diuretic in scarlatinal nephritis, cyanotic induration of kidney and sluggish urinary secretion from feeble circulation it is indicated.

Where simple failure of compensation occurs, and the heart cannot meet the demands sent in from the periphery for more nourishment, and the pulse becomes weak and irregular, digitalis is the remedy above all others.

In conclusion, we should bear in mind that digitalis is both a useful and dangerous remedy, and has a very limited range of application, that it is capable of great harm by its contracting effect upon the arterioles, thus shutting off nutrition; that its effect is greatly enhanced by rest, diet, and by stimulating elimination; and that its action is more marked, both upon the heart and kidneys, in the presence of low arterial tension, venous engorgement and obstruction to circulation; that the cumulation effect is not manifested when the drug is given in proper doses, and better elimination provoked, and finally, its preparations differ widely in their composition and action, due to the com-

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plex chemical construction, thus we should be exceedingly careful to obtain reliable physiologically tested products.

We might disregard the conditions of the valves per se, with few exceptions, and consider the heart muscle itself. Where the drug fails here it may be attributed to myocardial degeneration.

Strophanthus.—Although not as powerful a heart stimulant as digitalis, strophanthus is valuable because it does not affect the arterial tension, does not derange the digestion, nor is it accumulative in action. I believe in cases of relative cardiac insufficiency, in mitral stenosis, or where the arterial tension is high, strophanthus is a valuable substitute for digitalis. Strophanthin should be given in 1-200 to 1-60 of a grain every six hours.

The cardiac tonics which increase elimination are undoubtedly the best, and the diuretic action of strophanthus being exceeding uncertain, its tonic effect is not so marked as digitalis.

Spartein. — Spartein is especially adapted to the fourth group of cases mentioned, those cases of functional ataxia accompanying nervous disturbances, either arising from drug habits or from senile degeneration. It should be used in watery solution, either the infusion or hypodermically, if sulphate of spartein is used, in from ½ to 2 gr. doses repeated every three hours.

Caffeine.—Caffeine makes a suitable substitute for digitalis in those cases of chronic renal disease, because of its diuretic action. It is contra-indicated in acute renal disease. It may be used with advantage in high arterial tension when digitalis is contra-indicated.

It is recommended by Huchard to be employed in the following way, benzoate of soda, 45 gr.; caffeine, 30 gr.; distilled water, 75 m. This mixture is to be heated and 10 minims given hypodermically every 4 hours.

Strychnine.—This is one of the most valuable heart tonics we possess, being particularly adapted to those heart lesions where direct cardiac stimulation is contraindicated, as in senile lesions, in anemic conditions, acute infective fevers and neurotic cardiopathies. Its use is of especial value in surgical shock, collapse and respiratory failure in pneumonia. Its prolonged use tends to fatigue the vaso-motor centers in the medulla and spinal column, but the reflex stimulation of nutrition and digestion is extremely valuable in anemic states and functional cardiac derangements.

The dose varies from gr. 1-60 strychnine sulphate to gr. 1-15 in critical shock, repeated every hour.

Adrenalin. — Suprarenal substance does not seem to effect the normal heart or the normal pulse in organic heart disease. It does not affect normal blood pressure. But an intermittent pulse becomes regular, and a weak pulse stronger, the substance seems to have a tonic effect on the heart muscle, where the blood pressure is low and cardiac action weak from obstinate circulation, as in pneumonia, but its action is temporary and transient, although it may be a valuable adjuvant to other cardiac remedies. It may be given internally in 5 grain capsules, or hypodermically in 3 or 4 drops of a 1-1000 solution of adrenalin.

In conclusion, it is my belief that before cardiac stimulation in the form of direct cardiac tonics is instigated, we should first try the effect of absolute rest, improved general nutrition by diet, increased elimination and specifics where indicated. In the selection of cardiac tonics we should consider the pathological condition calling for aid, especially the tone of the heart muscle, the relative excreting power of the kidneys together with the general arterial system.

DISCUSSION.

Dr. Sidney J. Meyers said that the practice of using heart tonics in all cases where there are heart complications should be discouraged. A great many of these cases of heart disturbances are secondary, since derangement of one organ of the body almost

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inevitably leads to the derangement of other organs. In a great many functional disturbances the matter of elimination is overlooked in the desire to whip up the heart, whereas patients with ordinary heart lesions often live for a great length of time without serious inconvenience.

With regard to digitalis, the speaker thought the doctor should become more familiar with its administration. He himself had never had any good results from its use. He had used the extract of the suprarenal gland in cases of typhoid fever where the pulse could scarcely be counted with marked results. It acts very much like digitalis is supposed to act.

Dr. J. F. Purdom followed. He regarded digitalis as one of our best remadies and relies upon it as much as upon any drug, but thought it difficult to find conditions in which it should be given alone. He had never gotten good diuretic effects from digitalis or caffeine given singly, but they were eminently satisfactory in combination. In all cases of renal trouble where digitalis is indicated strychnia or caffeine should be combined with it.

Dr. T. B. Greenley thought digitalis useful in tachycardia, but if the heart were very weak he would combine some other tonic with it. He expressed his preference for nux vomica, even over strychnia, having used it for ten years in cases of weak hearts and nervous conditions. If digitalis is not used with great caution bradycardia will result.

Dr. J. Rowan Morrison looked upon the heart as a pump. The valves may leak a great deal but water still be pumped out; but if the wood is rotten the condition is very different. A heart may give forth all kinds of sounds without having lost it tone, but if it loses tone, swelling and edema will result, however good the valves may be. He thought more attention should be paid to the character of the pulse and less to the murmurs. The great point in the administration of heart tonics is to keep the patient at rest and under proper hygienic and dietetic conditions. Digitalis is more misunderstood than any other drug, because it has so many active principles that they conflict with each other. He advised its use when there is loss of compensation, but when there is hypertrophy with dilatation it is contraindicated. It is of advantage in certain chronic kidney conditions, where arterio-sclerosis is not present. When the tension is high it will not act as a diuretic.

Dr. Ap M. Vance thought Dr. Stucky had forgotten the best of all heart stimulants, the Kentucky Bourbon.

Dr. John G. Cecil thought the indiscriminate use of digitalis did more harm than good. He thought the old-fashioned combination of digitalis with calomel was right in line with what the essayist had said with regard to elimination and stimulation at the same time.

Dr. T. H. Stucky closed the discussion. He thought there was no more egregious error than the routine method of producing stimulation of the secretion of urine by acetate of potash and infusion of digitalis. Digitalis is absolutely contraindicated in every condition not characterized by a heart lesion, mitral in character. Another great mistake is that of giving heart stimulants and allowing the patients to resume their ordinary avocations. It should never be given, except under absolute rest. He would sum up the treatment of all these lesions in three words: rest, elimination and support. He mentioned the case of a young man whom he had expected to die, who was kept in a recumbent position for eleven months. No heart tonics were given, but elimination and support were looked after, and he is now able to conduct a fairly successful business.

Dr. Alfred Meyer, of New York, recommends the use of the fire escapes in tenement houses for the outdoor-rest-cure-treatment of tuberculosis.

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SOME USES OF THE SUPRA RENAL EXTRACT IN EYE, EAR AND THROAT PRACTICE.*

BY SAMUEL G. DABNEY, M.D.,

Professor of Ophthalmology and Clinical Professor of Othology and Laryngology in Hospital College of Medicine,

LOUISVILLE, KY.

The following brief notes are taken from my own experience with the extract of the supra renal gland:

They do not include many of the affections in this specialty for which the drug has been recommended.

In the eye the preparation I have used has been the solution of adrenalin chloride of a strength varying from 1-2000 to 1-5000. This has been useful (1) in removing chalazia; this little operation is done by clasping the chalazion in a little forceps made for the purpose, after first instilling a few drops of cocaine; then painting the conjunctiva over the growth first with the adrenalin solution, then with cocaine, and, finally, incising the chalazion and pressing or scooping out its contents. Here, as in other operations on the eye, the adrenalin increases the anesthetic effect of cocaine, and does away with the slight hemorrhage, which, though never serious, is sometimes a little annoying.

(2) In operations for strabismus and for pterygium, I have found it useful for the same reasons. In these cases some operators think the contraction of the tissues it causes is objectionable.

(3) In obstruction of the nasal duct I have occasionally injected the adrenalin in solution with the Anel's lachrymal syringe before probing. It has seemed to make the passage more open. Much is claimed for it in this particular.

(4) In iridectomy, whether made for glaucoma or preliminary to or during a cataract operation, I have in a number of cases used the adrenalin. It certainly lessens the bleeding from the conjunctiva if the incision is made far enough out to include this, and it has certainly seemed to me to greatly lessen the chance of hemorrhage from the iris.

(5) In eyes blind from glaucoma, where operation has failed to relieve the pain or is for some reason contra-indicated, it has in a few cases in my hands acted better than either eserin or cocaine or their combination. In one such case, however, in which I used the adrenalin followed by cocaine and eserin, I produced acute glaucomatous symptoms with great pain, lasting for many hours; cocaine with eserin had also acted badly, but in much less degree, while the eserin alone was beneficial to only a slight extent.

(6) In trachoma, the adrenlan solution applied to the everted lids before the application of bluestone has not only aided the cocaine in lessening pain, but has diminished the subsequent symptoms of irritation.

(7) In iritis, adrenalin has been a valuable adjunct to atropine. It is said to be rapidly absorbed into the anterior chamber, and probably acts by contracting the vessels of the iris.

(8) In the ocular symptoms of hay fever a solution of adrenalin chloride (strength 1-5000) has greatly lessened the itching and irritation. A weak solution of cocaine and eserine may be used at the same time—the latter to prevent mydriasis.

(9) I have used adrenalin a few times in enucleation of the eyeball. In one case in which general anesthesia was contra-indicated it proved of decided service.

In diseases of the ear adrenalin has been used (1) to a very limited extent in shrinking swellings in the lower part of the auditory canal which obstructed the view of the drum membrane; (2) In aural polyps it has shrunken the growths, aided the cocaine and made the removal either by acid or operation much easier; (3) in attic disease preliminary either to curetting or the application of medicines it has been of service; (4) in the mastoid operation

* Read before the Jefferson County Medical Society

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to control the oozing and gain a better view of the deeper structures, it has not seemed to me effective. I have never used it in ossiculectomy nor in acute otitis media with a perforation.

In diseases of the nose the adrenalin or solution of the supra renal gland has its most frequent application and its most striking effects. In a few cases its use is followed by intense sneezing, watery discharge, a sensation of heat and even of decided pain, lasting from a few hours to a day. Before the adrenalin chloride solution was put on the market, it seemed probable that these effects were due to some impurity in the extract caused by a defect either in its preparation or in its preservation. The same results, however, have occasionally followed the use of the adrenalin, and, indeed, this is more irritating than a solution of the gland itself.

More serious untoward effects I have never seen, and very few, if any, have been reported. An exception must be made of its tendency to be followed by secondary hemorrhage after operations. In regard to this there is a decided difference in opinion.

In my own experience it has not seemed to increase the danger of such an event. To the nose it may be applied either as a spray or on pledgets of absorbent cotton or dropped in with a dropper. As a spray I have found the following suggested by Dr. Stucky, of Lexington, useful:

℞ Sod. chlorid .....gr. v.
Resorcin .....gr. v.
Adren. chlor. (1-100 sol.)..ʒ. 1.
Aqu. dist. qs .....ʒ. 1.

It has proved valuable (1) in hay fever; here it has given much comfort in opening the nose, permitting nasal breathing, allaying the sneezing, itching and watery discharge, and alleviating the reflex symptoms. It has several times failed in my hands to benefit the asthma even when the nasal condition was much improved.

Unfortunately its effects are transitory—the benefit from an application lasting rarely more than two or three hours, and sometimes not more than an hour.

Its frequent use, however, does not appear to diminish its effect. In this disease it is most often applied as a spray, but may be used on pledgets of cotton or with a dropper. I have had no experience with salves centaining supra renal gland extract.

(2) In the nasal neuroses akin to hay fever, such as violent attacks of sneezing, transient obstructions due to swelling over the turbinates, itching in the nose and sudden attacks of profuse watery discharge, the adrenalin has sometimes proven very helpful.

Cases of this type are most common in neurasthenic subjects, and require attention to the underlying condition as much or more than to local treatment.

(3) In acute rhinitis it produces similar good results, but has, I think, no tendency to shorten the attack.

It should be combined with internal treatment.

(4) It is even superior to cocaine in making the diagnosis between general hypertrophy of the nasal mucous membrane and a turgescence of the erectile tissues, the latter completely disappearing after its application.

(5) In nasal operations, especially on the septum, it is a most valuable agent. Its effect in preventing hemorrhage is little less than marvelous. Moreover it not only increases the anesthetic influence of cocaine, but, if used before, it lessens the danger of unpleasant constitutional effects.

This may be due either to the contraction of the tissues allowing a less complete absorption, or, perhaps, the stimulating effect of the adrenalin on the circulation counteracts the cocaine. In nasal operations I have found it well first to use the above-mentioned solution as a spray, then to apply to the region to be operated on a pledget of cotton soaked in a 1-1000 solution of adrenalin chloride. This should be left in place for from three to five minutes, and should be followed by the

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cocaine solution similarly applied for about the same length of time.

After septal operations it has always been my custom to apply a fairly tight dressing for the first twenty-four hours. I have rarely had a troublesome secondary hemorrhage.

(5) In epistaxis except when it consists of a gentle oozing I have not found adrenalin of great value, perhaps, because the blood washes it away too rapidly for it to exercise its contracting effect on the vessels.

DISCUSSION.

Dr. P. Richard Taylor explained the effect of adrenalin in lessening the systemic effects of cocaine on the ground that it lessens the blood supply and there is less absorption. It has a perfect local anesthetic effect.

Dr. Wm. Cheatham had never seen it do good about the eye or nose. For controlling hemorrhage it is excellent. Notwithstanding the general proposition, Dr. Cheatham has found that his solution could be kept for a long time when mixed with cocaine. His method is to mix the two and apply to the nose on cotton. He thought the effects of adrenalin in edema of the uvula were marvelous. He had seen cases immediately clear up after the application of a one to ten-thousand solution. He had given adrenalin in benzoated alboline to a lady choking with edema of the larynx with direct relief. In any case of edema of the upper part of the air passages it would be the first thing he would use.

Dr. Leon L. Solomon thought the paper an evidence that we are beginning now to get the practical results of the vaunted Brown-Sequard remedies. He emphasized the fact that drug houses, with the lofty interests of the profession at heart, should be patronized in securing such drugs as adrenalin.

Dr. Wm. Bailey had seen such satisfactory results in his own case in controlling hemorrhage that he had concluded to experiment with it hypodermatically. In a number of cases of hemorrhage of the bowel in typhoid fever he had used it hypodermatically with most gratifying results. In a case of hemorrhage from the stomach he had administered it internally, and the hemorrhage was controlled and did not recur. He had also used it subcutaneously in hemorrhage of the lung with success. His method is to dilute it with normal salt solution, one to five, and then inject. It is a reliable heart stimulant, and undoubtedly contracts the capillaries, and in this way retards the inflammatory processes. It will blanch any part of the mucous membrane to which it is applied.

Dr. T. Hunt Stucky referred to the force and strength which it gives to the heart's action, and raised the point whether it is expedient in hemorrhage where adrenalin cannot be brought into direct contact with the bleeding surface to raise the heart's action and increase the force from behind the clot which nature forms. He thought the field of usefulness for adrenalin is limited to direct application, and opposed its hypodermatic use as unscientific. In cases where patients cannot take an anesthetic and the cocaine, adrenalin offers a valuable substitute in blanching the surface.

Dr. Wm. Bailey replied that it was his belief that the benefit obtained from contraction of the capillaries overbalances any vis a tergo given to the heart.

Dr. S. G. Dabney closed the discussion and explained that the essay had been confined only to the use of adrenalin in the eye, ear and nose. He would be disposed to try it in a case of severe nasal epistaxis. In hay fever its effect is only temporary, but it does give immediate relief and can be repeated indefinitely.

Dr. Rosa Engleman (*Medicine, June*) describes an epidemic of typhoid fever spread by cockroaches, and suggests sulphur fumigation for vermin extirpation as supplementary to our present methods of formalin disinfection.

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A RAPID METHOD OF BLOOD EXAMINATION FOR THE GENERAL PRACTITIONER.

BY F. H. MONTGOMERY, M.D.,
DANVILLE, KY.

MR. PRESIDENT AND GENTLEMEN:

The title of my paper indicates its aim; i. e., to lay before you a method of blood examination that will be of service to you in the general practice of medicine. As a general practitioner away from laboratories and skilled specialists, I have felt the need of additional aid in the differential diagnosis of many of our most common, and yet serious, diseases. I hope to show you a method that will help supply this need by indicating to you:

1. Whether an anemia is present in a given case, and, if so, its grade.

2. Certain conditions of the blood that exist in the early stages of pneumonia and do not exist in epidemic influenza or malaria; that exist in appendicitis and do not exist in those abdominal affections with similar symptoms, such as intestinal obstruction, acute gastro-enteritis, gall stones or stones of the kidney.

3. Means of differentiating malarial and typhoid fevers.

4. Means of diagnosis of those rare blood diseases known as pernicious anemia, lymphatic and myelogenous leukemia.

5. The possibility of trichinosis or lead poisoning.

To be of value to the general practitioner any method must require a few instruments or appliances, little time in its application, and must render positive aid in diagnosis.

The instruments needed in this method are a Tallquist hemoglobinometer, a microscope with an oil immersion lens, some cover glasses, a straight surgical needle and an ounce of Leischman's blood stain. The Tallquist hemoglobinometer, or scale, is a specially prepared absorbent paper and a scale of colors, each color representing a certain percentage of hemoglobin, bound in convenient size to be carried in the pocket. Its cost is $1.50. The microscope is expensive, but is essential to the equipment of a physician, whether he does blood work or not. The cover glasses should be of No. 1 thickness and $\frac{7}{8}$ inch square, and should be thoroughly cleaned by washing in warm soap and water, then put in strong sulphuric acid, rinsed, dried, and polished with tissue paper or a silk handkerchief. The needle should be of sufficient size to cause several drops of blood to flow from its puncture. The Leischman's stain is prepared as follows: "To a 1 % aqueous solution of polychrome methylene blue (prepared by adding $\frac{1}{2}$ % of bi-carbonate of soda to a 1 % aqueous solution of Erlich's rectified, or Koch's methylene blue, and ripened by heating at 37C. for 24 hours) add an equal quantity of a 1 % aqueous solution of aqueous eosin. Collect the precipitate which forms on a filter paper, wash once, dry and make a saturated solution of it in absolute methyl alcohol." A properly prepared and tested stain may be obtained of the Apothecary of the Massachusetts General Hospital, Boston, for 50 cents an ounce.

To make a blood examination the ear is pricked with the needle on the convex edge of the lobe, the first drop wiped away, and a small piece of the filter paper from the hemoglobinometer is brought in contact with a succeeding drop (avoiding pressure of ear) so as to cause the blood to be sucked up till a small part of the paper is drenched. This, as soon as the blood has lost its humid gloss, is compared with the scale, the stain being pressed against a pad of the paper; 90 to 100 % represents normal blood. Then with a clean cover glass the apex of a small drop is touched, taking care that the glass comes in contact with nothing else, and this dropped blood downward on another clean glass, corners out. The drop of blood should spread, if the

* Read before the Central Kentucky Medical Association, October 16, 1902.

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cover glasses are properly cleaned, over at least ¾ of each. As soon as it is thoroughly spread between the two they are drawn apart by a rapid sliding motion and allowed to dry in the air.

The method of using Leischman's stain is as follows: "Drop 5 or 6 drops of the stain on the cover glass, smear and let stand one minute; then add two or three times as much tap water and let stand one or two minutes. Decolorize one-half to two minutes in distilled water. Dry, mount in balsam and examine with oil immersion lens." This stain fixes and stains the specimen at the same time. It stains the red cells a pale or brownish yellow, the neuclei of all cells a blue; the protoplasm of the white cells a blue, lilac or reddish brown according to its affinity for the basic, neutral or acid stains. It stains the protoplasm of the malarial parasite a pale blue, the nuclei a red, and the stippling within the parasite a red. It develops a blue stripling in many of the red cells in malaria, anemia and lead poisoning.

Having made such an examination, the following conclusions may be drawn:

1. Whether or not an anemia is present, as shown by the percentage of hemoglobin.

2. Whether or not abnormalities are present in the red cells. They may show diminished color—called achromia; irregular shape—called poikilocytosis; increased size—called increased volume index; or they may be nucleated—when they are called blasts. If nucleated, and of normal volume index, they are called normoblasts. If nucleated and of increased volume index, they are called megaloblasts. They may also show granular stippling or parasites.

3. Whether the total number or the ratio of any variety of the white cells is increased.

4. Whether myelocytes are present.

Finally, as to the practical value of the facts thus obtained.

Diminished percentage of hemoglobin with achromia means a simple anemia.

Diminished percentage of hemoglobin combined with achromia, poikilocytosis and increased volume index means a severe anemia.

Diminished percentage of hemoglobin combined with achromia, poikilocytosis, increased volume index and normoblasts means a very severe anemia, probably pernicious.

Diminished percentage of hemoglobin combined with achromia, poikilocytosis, increased volume index, normoblasts and megaloblasts, with a preponderance of megaloblasts, means pernicious anemia.

The presence of granular stippling in the red cells means malaria, anemia or lead poisoning.

The presence of the malarial parasite is diagnostic of malaria.

Neutrophile leucocytosis is present in pneumonia, absent in influenza, malaria and typhoid. It is present in appendicitis, absent in intestinal obstruction, acute gastro-enteritis, gall stones and stones in the kidneys. It is usually present in all cases of severe inflammation with pus formation.

Oxyphile leucocytosis is present in trichinosis and certain skin diseases.

Basophile leucocytosis is present in lymphatic leukemia and some stages of typhoid fever.

Myelocytosis is present in myelogenous leukemia. The myelocite is not found in normal blood. It is a non-ameboid, neutrophylic or oxyphilic cell with a round nucleus, found normally in the bone marrow. It may be found in small numbers in any grave anemia or marked leucocytosis, but is never found in numbers sufficient to increase the total leucocyte count, except in myelogenous leukemia.

To determine accurately the question of a leucocytosis, a count of the white cells per cubic millimeter, and a differential count of varieties must be made. The former necessitates the use of the Thoma-Ziess hemocytometer, an instrument I purposely left out of the

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enumeration above because it is not absolutely necessary. With practice one soon learns to diagnose a leucocytosis from the stained specimen with sufficient accuracy for practical purposes. In cases to be reported, or where the question of operation or prognosis depends on the progress of a leucocytosis, the count must be made.

The Thoma-Ziess instrument consists of:

1. Two pipettes, one for red and the other for white cells. In each is blown a capillary tube which expands into a bulb containing a small glass ball. To each pipette is attached a rubber tube and mouth piece. The bulb of the red pipette is exactly 100, and that of the white 10, times the capacity of the capillary tube.

The capillary tube in each is graduated to tenths.

2. A slide containing a chamber 1-10 millimeter deep and a millimeter square, divided into 400 squares by 20 parallel lines which intersect 20 other parallel lines. Hence in this slide we have a chamber divided into squares each representing 1-10 of 1-400 of a cubic millimeter.

In making a count of the red cells the blood is drawn into the capillary tube of the red pipette to 0.5 of its length, and the end immediately submerged in a diluting fluid which is sucked up to the mark 101. This is thoroughly mixed, and a few drops blown out, then a small drop is put on the ruled chamber and the cover glass immediately adjusted. The specimen must be rejected if rainbow-like rings do no not appear under the cover glass. These are called Newton's rings. Breathing gently on the specimen before adjusting the cover glass will aid in developing these. It must be rejected if air bubbles are inclosed, if any of the fluid runs underneath the cover glass outside the moat, if the shelf is not well covered or if the cells do not appear well distributed.

Having secured a satifactory specimen the cells in from 100 to 200 squares are counted. This result is divided by the number of squares counted, and this quotient (which represents the average number of cells per square) is multiplied by 800,000—as each represents 1-4,000 of a cubic millimeter of blood that has been diluted 200 times in the pipette. The white count is made in the same way by using the white pipette and drawing the diluting fluid to 11. The cells in the whole number of squares should be counted and the result multiplied by 200. Several slides should be counted and the average taken.

This instrument should be thoroughly cleansed immediately after being used. The slide and cover glass should be washed in soap and water, and the pipettes cleansed by sucking through them water, then alcohol, then ether. When clean and dry the ball should not adhere to any part of the bulb, but should play freely when the pipette is revolved. If a staining fluid is used, any remains of it may be removed by using a 1 per cent. solution of hydrochloric acid in 170 per cent. alcohol, and following this by alcohol and ether.

Of diluting fluids Toisson's is probably the most useful. It keeps well; its specific gravity is near that of the blood, and it stains the white cells. It is made as follows:

Sodium chloride,	1.00 gram	or 15 grains.
Sodium sulphate,	8.00 "	or 120 "
Glycerine,	30.00 C. C.	or 1 ounce.
Water,	500.00 "	or 1 pint.
Methyl violet,	0.025 gram	or 5-12 grain.

Mix the first two thoroughly, add the glycerine and water, and finally the methyl violet. It should be filtered before used.

The differential count of leucocytes should include 200 to 500 cells. The normal ratio is 60 to 70 per cent. neutrophiles, 20 to 30 per cent. basophiles, and ½ to 5 per cent. oxyphiles. Many of the cells will be found difficult of classification. These are usually enumerated as unclassified forms.

A leucocytosis does not necessarily mean that the count of white cells in a

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cubic millimeter is above the normal of 7,500 to 10,000. We may have a leucocytosis with a normal white count per cu. m. m., the ratio of one variety being increased, but not sufficiently to run the total above the normal of 10,000. It can be readily seen that a blood containing 10,000 white corpuscles per cu. m. m. might have 6,000 or 60 per cent. neutrophiles, 2,000 or 20 per cent. basophiles, and 2,000 or 20 per cent. oxyphiles, thus making a marked oxyphile leucocytosis with a normal leucocyte count.

A discussion of a blood examination for the use of general practitioners would not be complete without including the Widal test for typhoid fever. It is not only possible but easy for a physician to make this test in every suspected case.

The requirements are a pure culture of the typhoid bacillus on nutrient agar; tubes of nutrient agar; tubes of boillon; a platinum loop set in a glass rod, and a microscope.

The pure culture of typhoid bacillus may be obtained of any bacteriological laboratory, and will grow at room temperature. It should be transplanted to fresh agar tubes every two or three weeks. The nutrient agar tubes may be obtained of any manufacturing chemist at the cost of about 75 cents per dozen. The bouillon tubes should be made by the physician himself, else they will prove expensive. Test tubes 6 by ¾ inches are the best, and if new should be washed in a solution of a drachm of commercial nitric acid to a quart of water and allowed to drain dry. If they have previously contained culture media they should be boiled half an hour in a 5 % solution of bi-carbonate of soda, washed with a test tube brush, washed in nitric acid solution as above, rinsed and allowed to drain dry. They are then provided with stoppers of non-absorbent cotton. The cotton should project about one inch into the tube, and should fit just tight enough to sustain the weight of the tube when lifted by the projecting portion. These are heated in a sterilizer, or ordinary oven, to 300 or 350° F. This moulds the stoppers to the shape of the tube.

The following is a good formula for making the bouillon:

Beef extract (Liebig)....	2.5 grm.	—37½ gr.
Peptone (Witte)..... ...	5.0 "	—75 "
Sodium chloride	2.5 "	—37½ "
Water.....	500.0 c. c.	—1 pint.

These are mixed and put in an ordinary double boiler and a mark made at the height of the mixture. They are boiled till the peptone is dissolved. Water is added to the mark previously made, to replace loss by evaporation. The mixture is then tested with litmus paper, neutralized with bicarbonate of soda, and hydrochloric acid added to slightly acidify. It is then run into test tubes to the depth of 1 inch, and sterilized for half an hour on each of three successive days.

A much more accurate, but also more complicated, method is to weigh the inner boiler, add the above ingredients, boil till the peptone is dissolved, weigh again and add water to 500 grammes plus the weight of the boiler; take 5 cc. of the mixture and add 45 cc. of distilled water, boil in a porcelain dish 3 minutes to drive off carbon dioxide, then add 1 cc. of a ½ % solution of phenolpthalein in 50 % alcohol. A 1-20 normal solution of sodium hydrate is then dropped into this from a graduated burette till a bright pink color is produced. Read off the burette the amount of this solution required to neutralize 5 cc. of the bouillon. Hence this quantity of the full strength normal sodium hydrate solution will neutralize 20 times 5 cc., or 100 cc., and it will require 5 times this amount of the normal solution to neutralize the 500 cc. This is added and the mixture boiled again for a short time, water added to replace evaporation, and the test repeated to insure accuracy. Then 1½ % of normal hydrochloric acid solution is added, and the bouillon run into test tubes and sterilized as above.

The platinum loop is used in transferring the growth of germs from one

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tube to another. It is heated to redness in the flame of a Bunsen burner or a spirit lamp, cooled, and a small quantity of the growth taken up in the loop and rubbed gently over the slanting surface of the agar, or mixed thoroughly with the bouillon. The bouillon culture should be used when between 12 and 48 hours old.

To make the test several drops of blood are secured in a small test tube, the serum allowed to separate from the clot and the clot removed. One drop of the serum is mixed with ten drops of the bouillon culture and a small quantity examined on a clean slide under a cover glass with a medium power dry lens. A control test should always be made by examining the culture immediately before making the test to be sure of its motility and the absence of clumps. A reaction should occur within 20 to 30 minutes, and consists in a slowing of the motion of the bacilli and their agglutinating into clumps.

THE SIGNIFICANCE OF ALBUMINURIA.*

ORVILLE A. KENNEDY, B.S.,M.D.,
Formerly Professor of Chemistry, Central University of Kentucky.
LOUISVILLE, KY.

The researches of Bright proved the importance of albuminuria as a diagnostic sign, which at once led to extended and systematic researches as to its significance.

Bright advanced the view that albuminuria was pathognomonic of organic renal lesions, while Spittal and a few other contended that albumen was found in the urine in cases where there were no organic lesions of the kidneys. Bright's views met with but slight opposition, and the word "albuminuria" continued to be considered a synonym of Bright's disease until about the year 1840, when, largely through the efforts of Royer, the accuracy of the views of Spittal were conclusively demonstrated; and as a contemporaneous writer put it; "To-day for everybody the word albuminuria represents a symptom common to a variety of affections." But in the half century which has passed since the day of Royer the number of affections in which albumin has been found in the urine has largely increased.

Proteids are not normal constituents of the urine, but three varieties—serin or serum albumin, globulin albumin and peptone are known to occur in the urine in diseased conditions and the occurrence of other proteids is almost proven. Serin is analogous to serin of the blood and is a constituent of the lymph, chyle and many serous exudations. It resembles egg albumen, but differs from it in its behavior towards ether and nitric acid. Globulin is the albumin which is the chief constituent of the corpuscles of the blood. It is more diffusible than serin. Peptone is the proteid into which all forms of albuminous matter in the food are converted by the gastric juice. It is the proteids of the food in a form of hydration. It is the most diffusible of the albumins, being twelve times more diffusible than serin.

Peptone does not respond to the heat nor the nitric acid test, nor to any of the other ordinary tests for albumin, and this has led to its being called "latent albuminuria"—a name which is not only inappropriate, but misleading. Although peptone occurs frequently in the urine, little attention has been given to its study, and its significance is unknown, yet there is abundant proof that its presence will be found some day to be of great diagnostic value.

Serin and globulin compose the precipitates obtained with the usual tests for albumin. The former, according to Jaccoud, is the most pathological of the albumins, and according to Jeanton, (1) globulin is far less frequently found than serin in urine. But Dr. Noel Patten (2), after extensive researches on this subject, concludes: That in all cases of albuminuria both serin and globulin are present in the urine and that the relative proportion of these

*Read before the Louisville Society of Medicine.

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proteids varies considerably; that globulin, the highest during the night, falls greatly after breakfast, when it usually reaches its lowest point, rises again towards evening. There appears to be some relationship between the variation in the proportion of serin and globulin in the urine and a similar variation of these proteids in the blood plasma, but there is reason to believe that this is not always true. High pressure seems to favor the transudation of serin, whilst a low blood pressure seems to favor the transudation of globulin.

At one time much stress was laid upon the physical properties of the albumin in the urine. Bouchard in 1880 asserted that retractile albumin, i. e., albumin which when subjected to heat coagulates and retracts into lumps or flocculi, leaving the urine perfectly clear, is the albumin met with in nephritis, while non-retractile albumin is capable of dialysis, notwithstanding the integrity of the renal filter, and does not denote an organic lesion of the kidneys. Bouchard's theory, however, has been shown to be false, as it has been proved that this retractility depends upon chemical composition of the medium in which the coagulation was obtained. Although admitting that retractility depends upon the chemical conditions of the medium, Jaccoud (3) and Jeanton (4) still claim that every marked case of nephritis is accompanied by retractile albumin, that with great probability of being right, the existence of a renal lesion can be admitted whenever an abundant and rapid retractile precipitate is obtained. Jaccoud also states: "I can affirm that the following characteristics belong only to an old nephritis—large flocculi form at once, and they are of a dirty green color."

Most of the diseases, if not all, with which albuminuria may be associated may be classed under the following heads:

1. Albuminuria with coarse organic lesions of the kidneys, which includes chronic parenchymatous and interstitial nephritis and acute diffuse nephritis.

2. Functional albuminuria or albuminuria with no evident organic lesions.

3. Extra-renal albuminuria derived from the genito-urinary tract.

From what has already been stated it can be seen that the significance of albumin in the urine is not patent either from its chemical or physical properties. Its presence, then, simply serves to point to the existence of one of these three widely varying conditions and does not serve to differentiate between them.

How then are they to be distinguished?

In order to answer this question it is necessary to consider the etiology and symptoms of these affections.

Acute diffuse nephritis may be caused by exposure to cold, by toxic agents—such as turpentine, carbolic acid, chlorate of potash, and cantharides; by the poisons of exanthematous fevers, diphtheria and typhoid fever; by pregnancy and by extensive lesions of the skin as in burns. In this form of nephritis changes always exist in the epithelial, vascular and inter-tubular tissues of the kidneys. (7) This disease usually begins abruptly, except after fevers, when its onset is less sudden, but its existence may be suspected by a marked paleness of the patient and a puffiness of the face or swelling of the ankles. Lumbar pain, nausea and vomiting may be present. Fever may be present, but often in adults there is no rise in the temperature. The changes in the urine are the most characteristic symptom. There may be at first suppression, but more commonly the urine is scanty, highly colored, high specific gravity, and contains blood, albumin and tube-casts. The albumin is abundant, forming a curdy, thick precipitate. (8) On standing a thick deposit forms in the urine, which contains blood corpuscles, epithelium from the urinary passages, hyaline, blood, and epithelial casts. The pulse is usually hard and tense and the second aortic sound accentuated.

The history of the case, the scanty,

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high colored, heavy urine, the blood and epithelial casts, "particularly those made up of leucocytes," (9) are the most important points in most cases in determining the significance of albumin in this disease.

Chronic parenchymatous nephritis is frequently a sequel to acute nephritis. It, also, may come on insidiously from taking cold; as a result of repeated pregnancies, or in the course of phthisis. (10) It is a disease of the young, rarely appearing after the age of forty. The most important symptom in this disease is the presence of albumin. It is persistent and abundant, and remains so until the last stage of the disease is reached—that of renal atrophy—when the quanity of albumin is diminished and may even disappear. The urine in parenchymatous nephritis is usually yellow or highly colored, more or less cloudy in the early stages, later becoming pale and turbid. The specific gravity is usually high and the quantity nearly always diminished in the early stages; in the later stages the specific gravity is low. The urine on standing usually deposits a heavy sediment containing urates and phosphates, leucocytes, sometimes blood corpuscles, but not so numerous as in the acute disease, and numerous tube-casts—especially hyaline, but also epithelial, granular and fatty casts. According to Bartels, "The majority of the casts are pale hyaline, or slightly striated, and often carry debris of epithelial cells. The more chronic the case the more frequent the waxy casts." Anasarca is generally a prominent symptom and serous effusions are not uncommon. The general surface, but more especially the face, presents a characteristic dull white, puffy and pasty aspect, being also smooth and glossy, these appearances becoming more marked as fatty degeneration proceeds; puffiness of the eyelids often attracts attention to the existence of this form of disease.

Chronic interstitial nephritis always has an insidious onset and is independent of any obvious immediate exciting cause. It seems that in some cases there are hereditary influences. It is chiefly associated with gout, chronic lead poisoning, chronic alcoholism, chronic dyspepsia, repeated exposure to cold, syphilis and lithemia. Some believe excessive use of meat may become a causative factor.

In regard to the presence of albumin in this disease, Rendu states: "Even as the urine of parenchymatous nephritis so does that of interstitial contain albumin almost always, but while in the first affection albuminuria is the chief phenomenon and excels all the other phenomena in importance, in the latter albumin is a secondary and contingent phenomenon." Jeanton states: "The amount of albumin is ordinarily feeble; it occurs as a slight opalescent cloud, rarely flocculent, appearing slowly and at the end of a few seconds. It is not in the first stage of the disease that albuminuria is established permanently; it develops by starts. From time to time the urine becomes albuminous for a greater or less time, then the albumin disappears to reappear again, and this during months, often indeed during years; it is only at the end of a number of years of this irregular progress that it becomes permanently established." (12) The urine from the start is increased in quantity and polyuria continues until the heart begins to fail in the latter stages of the disease when the quantity of urine diminishes. The color of the urine is usually pale; it is transparent, opalescent and the specific gravity is low. There is as a rule little sediment. Casts are not abundant in this variety of the disease and are mostly hyaline, exceptionally granular. Forcible cardiac action with arterial tension is usually present. Dyspepsia and loss of appetite are common. Disorders of vision are among the earliest symptoms. Edema is not common. Slight puffiness about the ankles may be present, but dropsy, as a rule, does not appear.

Functional Albuminuria. The question as to whether albumin can pass

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through or be excreted by the kidneys without the existence of coarse organic lesions has not been positively determined. Some investigators assert that albumin is excreted by the kidney only when there is a break in the continuity of the structure of this organ, that this break or lesion is sometimes capable of repair, and results in no permanent damage to the kidneys. Other investigators, on the other hand, claim that a perversion of the functional activity of the kidneys may give rise to a temporary albuminuria. Dr. Ralfe has offered a most valuable explanation of how albuminuria can result from functional derangements of the kidneys by the suggestion that the various forms of functional albuminuria are mostly due to metabolic activity of the renal cells—that function by which they separate albuminous constituents from the blood, and either appropriate or convert them for their own nutrition or decompose them into urea and other products. (13) When this function is inadequately performed, either from excessive work thrown on healthy epithelium, or from any cause tending to impair their functional activity, albuminuria may result.

The name 'functional albuminuria seems more appropriate for this form of albuminuria, in which there are no evident organic renal lesions than intermittent, cyclical, physiological and other names proposed, because it is broader and serves to bring out the distinction between this form and the form in which there are distinct organic renal lesions.

The conditions recorded as giving rise to functional albuminuria are numerous. Among the most important may be mentioned those recorded by Dr. Goodhart (14) in 1890 and by Dr. Hingston Fox in 1892. Dr. Goodhart gives as the most important forms: 1. The Lithemic, which may occur at all ages, the result, especially in children, of too heavy feeding on solids without sufficient liquids being taken with the food. 2. Hemoglobinuric in which instead of the blood-colored urine of hemoglobinuria, albumin is passed. This form is sometimes caused by a cold bath, and it is the paroxysmal albuminuria of other writers. 3. Neurotic. Dr. Goodhart considers the theory of causation to be the exhaustion of the higher brain centres from work and worry; the lower centres being relieved, so to speak, of the inhibitory influence of the higher centres, fall into a turbulent condition, and hence cause an intermittent discharge of albumin—a condition, perhaps, analogous to the flushing of neurotic women.

Dr. Fox (15) mentions as causative factors of this form of albuminuria unstable circulation. In these cases he thinks there is a loosely built circulatory apparatus, with variations of the blood tension; the pulse is often compressible, and the urine often deficient in acidity. This is the form often described as albuminuria of adolescents, cyclic albuminuria and hepatic albuminuria. He also mentions strain or shock, as severe muscular exercise, mental strain and shock of cold. Also a variety resulting from the indigestion of certain articles of food, drugs or poisons. He mentions tea-tasting as one of these causes.

The urine in functional albuminuria does not have the characteristics usually found where there are evident organic lesions of the kidneys. The albumin is found, usually, only in traces, but in some cases it may be found in large amount, is intermittent, and does not persist for a great length of time. Tube casts are *absent*, but cylindroids may be present.

In the last form—extra renal albuminuria—albumin is found in the urine only in traces, and is derived from the genito-urinary passages. It may accompany leucorrhea, gleet or other venereal discharge, and cystitis. It may be due also to the natural seminal fluid, or to prostatic secretion. When due to these causes the albuminuria is usually present only in the early morning urine. Another cause is oxaluria,

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which may give rise to albuminuria by the sharp edges of the crystals of calcium oxalate scratching the mucous membrane of the urinary passages. No tube casts nor cylindroids are found in this form, but the presence of pus, a vaginal discharge, calcium oxalate or spermatazoa will assist in making a diagnosis.

To sum up—three proteids—serin globulin and peptone—are found in the urine as abnormal constituents. Serin and globulin compose the precipitate of albumin obtained by the usual tests. They occur together nearly always, but in varying proportions, the relative proportion varying greatly in every case at different hours of each day. The significance of this variation is not yet determined.

Peptone does not respond to the ordinary tests for albumin. Its significance is not yet determined, but there is reason to believe its presence will prove of great diagnostic value.

The presence of serin and globulin may denote either the existence of an organic lesion of the kidneys, a functional derangement with no evident organic lesion, or no disease of the kidney at all, the urine having become albuminous after leaving the kidneys.

It is often difficult to differentiate between these three conditions. The most conclusive sign that an organic lesion exists is the presence of tube casts. Tube casts may not be constantly present, and one examination may not be sufficient to exclude the existence of an organic lesion.

Functional albuminuria has for its chief diagnostic sign the persistent absence of tube casts, although cylindroids may be present.

In extra renal albuminuria the urine is usually normal in quantity and composition. Tube casts and cylindroids are absent. The quantity of albumin is usually small. Pus, calcium oxalate or other characteristics of the existing lesion is present to indicate the source of the albumin.

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Society Proceedings.

THE LOUISVILLE SURGICAL SOCIETY.

Stated Meeting, June 1, 1893, Dr. S. G. Dabney, President, in the Chair.

STRANGULATION OE THE ILEUM.

Dr. J. Garland Sherrill: Mrs. L., white, aged 44, was seen in consultation with her physician, Dr. Thixton, on Thursday, May 22, giving the following history: She has for some time suffered from pelvic trouble, including one or two attacks of local peritonitis. As a result her health is poor. On Sunday, May 22, she had her last stool following a dose of calomel. Tuesday night she began to complain of severe pain in the abdomen, with nausea, and Dr. Thixton ordered an opiate over the telephone. On Wednesday she took a purge which was not retained; also several enemata, without result. She vomited several times that day and at night took an opiate to allay pain and give rest. On Thursday morning she vomited again, and when I saw her Dr. Thixton had made a diagnosis of internal strangulation, which I confirmed, also making a diagnosis of a small pelvic growth. The abdomen was slightly distended, knotted by the contracting coils of intestines and very tender. She was still nauseated and unable to pass gas or feces. Temperature 98°, pulse

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100, face anxious. The danger of delay was explained to the family, but they desired further effort to relieve by enemata. These failed and we operated at 8 p.m.

Upon opening the abdomen a quantity of serum escaped and the intestine showed the bright filmy adhesions of a beginning acute inflammation, suppuration not yet having occurred. The colon and cecum contained quite a quantity of hardened feces; the appendix was normal. It seemed scarcely possible that a fecal impaction could have caused the inflammation, so the investigation was carried further. The omentum, which was bound to the pelvic viscera, was loosened and this small cyst with the ovary and tube removed. There was no evidence of an acute inflammation in the pelvis, hence I looked again for the strangulation, finding it in the lower foot of the ileum, which was constricted under the mesentery of a twisted fold lying over it. By turning this fold the constriction was relieved and about it was found the greatest evidence of the inflammation. The gut was not gangrenous and the woman is doing nicely.

DISCUSSION.

DR. LOUIS FRANK: We should be careful not to close up the abdomen too soon in such cases. In the case of women particularly we should make a careful examination of the pelvis, gall-bladder and other structures. Where time is not a feature, whenever we open the abdomen we should be careful to examine the right iliac region and the right hypochondrium particularly.

DR AP M. VANCE: In cases of obstruction where the distension is very great it is often difficult to find the cause after the abdomen has been opened. Dr. Sherrill is to be congratulated upon his skill in this case. The real cause of the trouble is often overlooked.

FRACTURE OF NASAL BONES.

DR. WM. CHEATHAM: I have a case of a young man who was out riding. The horse ran away and kicked in the bridge of his nose, crushing all the bones, making also quite a large cut at the bridge of the nose. The doctor had sewed this up. The nose was so mashed out of place that I had great difficulty in building it up, and on account of edema I could not put on an outside splint. The left eye was completely closed by swelling. I do not know what the result will be. I washed it out well and controlled the hemorrhage easily with adrenalin. The tissues were so engorged that cocaine would not have had much effect. I gave him strychnia and nitroglycerine and then used cocaine and adrenalin. The two should be given in combination when the tissues are so engorged, as cocaine is not readily absorbed; I used hollow splints on inside of nose,

DISCUSSION.

DR. S. G. DABNEY: I would have supposed that in Dr. Cheatham's case the adrenalin could have been administered better with a spray than with a dropper, though in that way it could be applied to the right place with the head thrown back. I usually apply it on absorbent cotton. Adrenalin is of enormous advantage in accidents of this kind, and seems indispensable to us now. I noticed an article in the last number of the *New York Medical Journal*, by Dr. Douglas, who takes the ground that although it aids in the local effect of the cocaine, it really lessens the amount of absorption into the system. I am inclined to think he is correct, especially if adrenalin is applied first. We are less apt to have toxic effects following cocaine if used in combination with adrenalin.

PERFORATING WOUND OF THE ABDOMINAL VISCERA.

DR. AP M. VANCE: I operated on a case with forlorn hope the other day. I was called to see a little girl, who forty-eight hours before had fallen through a skylight and caught upon a gas-jet. She sustained a fracture of the thigh and a puncture of the abdomen on the line of the umbilicus, one inch to the right.

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There were symptoms of tremendous disturbances in the peritoneal cavity. The doctor who was first called had found the omentum sticking out of the wound, so he cut it off and pushed the remainder back with a probe and put in a stitch. I said she would die, but that I would give her the only chance by cleaning out the cavity. Upon opening the abdomen I found considerable blood coming from the pelvis. After being certain that the small intestine was not wounded, I went above and found the omentum about the large bowel had been wounded, and clots were all mixed up in it. There were other large clots about the liver, and organized lymph was everywhere. I found a wound of the stomach. The escaping gastric secretions had so changed the structures round about that I could not make proper closure. I grafted the best omentum I could find over the wound. The child died twelve hours afterward.

The interesting feature to me was that there was marked peritonitis above and only mild below, and the distention was almost entirely outside the intestines. When I made the first incision everything looked natural so far as the intestines were concerned. The child died from sepsis. It must have been glass that caused the wound. I found a piece of cork in the cavity, which must have come from the stomach. I operated fifty hours after the injury, and the child lived twelve hours.

DISCUSSION.

Dr. J. Garland Sherrill: This case shows how careful we ought to be in the treatment of injuries of this class. It was certain that the abdomen had been penetrated, and it would not have been much more trouble to have opened it up at the time, and life might have been saved. Military surgeons say that it is better to treat gunshot wounds in this region expectantly, but in private practice I think this should not be done unless we are sure there has been no injury to the bowel.

Dr. Louis Frank: I believe it is the consensus of opinion among surgeons that such a wound as this should have been explored at the time. That it should have been permitted to go on as long as it did is a sad commentary on the effect of surgical teaching on some of the general profession. This is perhaps due in part to the difference of opinion that exists as to the treatment of this class of injuries. That is probably more true of stab wounds and gunshot wounds, since our course is not always clear. The experience of military surgeons in the Spanish-American and South African Wars has shown that penetrating wounds of the abdomen are far better left alone, that 50 or 60 per cent. will recover, and practically all operated upon will die. But in civil life we have a different proposition. There have been many experiments made to determine an absolute means of diagnosis of penetration of the intestines, but we are now right where we were at the beginning. In the majority of cases it is impossible to make an absolute diagnosis of penetration following a stab wound or a gunshot wound. What, then, are we to do? Personally, I think it is better to explore every case, for this does no harm in the hands of a skilled surgeon. Otherwise, it might be better to let them alone. But whatever good that is done must be done early, for it is early interference that gives the greatest hope to the greatest number of cases.

Dr. J. S. Chenoweth: I merely want to emphasize the importance of early operation and to insist that all such cases should be explored. I am reminded of a case I saw some years ago, showing what can be done by unskilled men. A doctor who had been called to see a stab wound attempted to explore it. I doubt if he had ever seen the inside of the body before, for he sewed the intestines tight to the wound. There had been no injury at all to the viscera, but I was called in a few days on account of obstruction and found everything sewed up. The man died.

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PERFORATING WOUND OF THE ABDOMEN.

DR. IRVIN ABELL: In the latter part of April I was called to a stab wound of the abdomen. The intestines fifteen inches below the stomach were cut three-fourths of an inch. The omentum was cut transversely about three inches and the deep epigastric vein severed. The bleeding was stopped and the gut closed with the Lembert suture. I thought best to tie the omentum off close to the colon, to prevent leaving an opening through the center. The boy was put to bed with a pulse of 130 and did very nicely except for the vomiting which ensued. There were no evidences of peritonitis or sepsis, but he continued to vomit, six or eight times in twenty-four hours. He first vomited the contents of the stomach and later bile was with it, and on the fourth day the vomit had a brownish color and a peculiar odor—a disagreeable, sweetish odor. He died on the seventh day. There had been no unnecessary handling of the intestines and the operation did not require a great length of time. Possibly the tying off of the omentum may have caused some disturbance of the abdominal sympathetic. Death evidently occurred as a result of exhaustion due to continued emesis.

DISCUSSION.

DR. AP M. VANCE: The report of Dr. Abell is very interesting. I had one man to live ten days with a perforating wound, the bullet having wounded a big vessel and gone on down into the southeast corner somewhere. His heart ran away with him, and I always thought there must have been some injury to the solar plexus.

STANGULATED HERNIA.

DR. J. GARLAND SHERRELL: I had the good fortune to see an interesting case just before I left for New Orleans. It was that of a woman 64 years of age, who had been suffering from Sunday to Friday with vomiting, but without much pain in the abdomen. Her physicians noticed that she had a femoral hernia, so he reduced a large part of it, all except that which she said had always been present. She went along from day to day without any peritonitis or pain in the abdomen to any extent. When I saw her she had a slight tenderness in the hernial sac, and that morning she had fecal vomiting, but very little pain. I made a diagnosis of strangulated hernia, and two other physicians concurred with me.

The operation was done within two hours after I first saw her. I made my incision above Poupart's ligament, and found the knuckle of the gut caught, the constriction holding down the gut itself, but leaving the mesentery free. The line of the constriction was so thin that you could look straight through it. I felt that it would be unsafe to leave this gut, as the knuckle was black and did not respond to heat, so I made an excision, doing an end to end anastomosis by the Lembert method. The anastomosis was made in less than twenty minutes, the entire operation consuming not more than thirty. She did remarkably well, and has had very little inconvenience. She had a stool on the third day, and made a fine convalescence. It is extremely dangerous to allow cases of this kind to go on for five days. The peculiar feature of the case was the absence of pain and distention. I used fine silk sutures for the intestinal work.

DISCUSSION.

DR. AP M. VANCE: DR. Sherrill did a very fine piece of surgery, and is to be congratulated most decidedly. I believe no woman should be allowed to vomit for five days before the surgeon is called in. After this time had elapsed there was nothing to do but resect the bowel. I think the opening above was an advantage, though I have done the same operation through the canal and gotten the same result. I know, however, of a fatal result of a similar case where the knuckle had slipped back before the sac was opened. The woman died five days afterward. There is a difference of opinion as to the use of chromicised catgut in these cases.

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Dr. Louis Frank: I also wish to add my word of praise of this work. Personally, I prefer the use of catgut in closure of the intestine, but I believe the through-and-through suture tying the last suture on the outside is preferable. It can be used more rapidly than the Lembert suture, and ordinarily gives a more perfect closure. I think in these cases we should abandon the use of artificial devices, and use the direct suture of the intestines. It can be done just as quickly and more so than with the use of even the Murphy button. If the case is going to get well, it will recover just as quickly after suturing as after the use of any mechanical method. With the exception of the Murphy button, I am opposed to the use of any mechanical device. It is always the unexpected that happens, and we do not always have these devices with us anyway. Every man expecting to do any abdominal work at all should operate on a few dogs and practice intestinal suturing, for this skill will often save life.

Dr. Ap M. Vance: Some time ago I had a woman with three hernias, a right inguinal and two femoral hernias, and I wanted to cure all of them at once. I opened up the inguinal hernia, reached down and pulled out the sac of the right femoral, and gave it a twist. For the femoral on the left side I did the ordinary operation. The two femorals were cured, but the inguinal recurred, owing to two former operations and to the general enteroptosis present.

Dr. J. Garland Sherrill: I did not attempt to do anything with the ring in my case because the woman was of such an age that she could not be here for many years, and I thought the case too serious to waste time. So far there has been no recurrence. I have tried to close the ring on several occasions. I believe it can be handled better from above than from below, and we can get at the trouble without damage to the femoral vessels.

As to the use of mechanical devices, I believe they should be thought of only as secondary considerations for a few indications. Every man who does abdominal work should certainly know how to suture the intestines. In strangulated hernia of any kind, we should be very careful about making reduction when the patient is vomiting fecal matter. There is danger of reducing a gangrenous piece of gut which will slough off and introduce gangrenous matter into the peritoneal cavity.

GONORRHEA IN CHILDREN.

Dr. I. N. Bloom: A week ago today I saw a boy ten years old with gonorrhea and balanitis. His penis was unusually well developed for his age; there was no pubic hair, no phimosis. He had a discharge from the penis which was shown to be gonorrheal. He was a neatly-dressed white boy, and had a very intelligent father with him. The attention of the boy's mother had been directed to the trouble by the boy's sisters who accompanied him to school, and saw him pinching the penis frequently. Anxious to find out the cause of the infection, I questioned the father closely, and he told me there were three children, the boy and two girls, aged 11 and 13. The father admitted that he thought there was something wrong with the girls, and I had them brought to the office.

One was 13 years old, under size, healthy, neatly dressed. Placing her on the table I found her urethra much swollen and tumefied, and pus in it. She had the hymen intact, and the labia majora were covered with short, pigmented hair. With a platinum wire I removed the pus from the urethra, and placed it on two slides, and an examination found it to be gonorrheal. She was also troubled with partial incontinence, especially at night, and with great pain on urination.

The second little girl was entirely undeveloped, but had specific vaginitis. She had no hymen. The vagina was full of pus. On stretching the parts, the vagina was found too small to ad-

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mit the little finger, and the vaginal opening was shown on stretching to be little larger than a lead pencil. Both girls had well developed gonorrhea, and the secretion showed abundant gonococci.

I inquired into the cases particularly, and found that the family lived in two rooms. The girls slept together and the boy with the parents. I requested the mother to call, but have not seen the girls since. I circumcised the boy last Wednesday. I questioned the father, and could get no history of the manner of infection. He said the mother kept the little girls very strictly, and did not allow them to associate with other girls. They had this complaint three or four weeks before the boy. I have no idea how it started. I believe this is the youngest boy I have seen with gonorrhea, though I have read of younger ones.

THE X-RAY IN THE TREATMENT OF SKIN DISEASES.

I want to report two other cases. One case I saw in consultation with the uncle of the child, a physician of good standing. This child was 6 years old, and on the calf of the right leg had a fungoid growth two or three inches long, and about an inch and a half wide, an irregular parallelogram elevated from one to three lines above the healthy skin. It was grayish translucent in color, intimately adherent, and had been there for several months. Around this were one or two pustules, and on the other leg six or more vesico-pustules of recent date. The physician to whom I alluded, and another who had been called in, both stated that they had never seen anything just like it. A third member of the profession thought it tubercular, and recommended the X-ray treatment. I do not know whether the X-ray treatment was applied more than once or not. I was then called by the first two gentlemen, and saw the case and got the further history that the child, when a few months old, had developed epileptic convulsions, and been put on bromide of potash from that time. During the few weeks previous to my seeing the child, it had grown very peevish, and had been on the decline. I had seen such cases before, and said that the trouble was due to the bromide, and that the X-ray was not necessary. I recommended curettement in case the affection did not subside with the discontinuance of the bromide. That was in February. In April the parents came to me with the child; the eruption and growth were gone after no other treatment than cessation of the bromide. Meantime the convulsions had become severe, and I suggested that with the uncle as attendant, it might be well to again use the bromide cautiously. I mention this case for reasons that will appear later on.

I saw another case, a gentleman with the following history: He had changed his business to one in which he had to use his hands. Noticing an eruption appearing, he went to a certain physician, who said it was eczema and suggested the X-ray. He was sent to an "X-ray man" of high standing, and the treatment was applied. The doctor had stated that the X-ray was the only thing that would cure eczema, and it was applied thirty times in about as many days. Patient came to me with dermatitis affecting the palms and dorsa of both hands, an ulcer as large as a dollar on his wrist, dermatitis on the other hand, but no ulceration. I noticed that he had an ulcer on the corner of the mouth, and he said he had sores in the mouth. These had been touched with carbolic acid, and there was one on the buccal mucous surface of the right side which had not been touched. I asked about a local penile lesion; he said he had the remains of one. He had had a sore there about the middle of January, but it "did not bother" him much, and the doctor said it did not amount to anything. There had been no eruption, or he had noticed none. This sore disappeared, but the eczema on the palms began about two weeks after he changed his business,

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that is, about the middle of March. It only affected the palm of the hand. He had patches in the mouth, and went to the doctor and said: "Doc, I had a big scare two or three weeks ago; do you think this can be the real thing?" The doctor said, "Oh, no."

The point I want to bring out is, first, as to the application of the X-ray for supposed eczema; in the second place, its application to a syphilitic eruption of the palms; in the third place, thirty daily visits for the cure of this condition, the artificial production on the hands of a dermatitis, on one wrist of an ulcer, and just short of it on the other, and the infliction of the dorsa of both hands. I want to protest against the abuse of an instrument capable of so much good. I have heard it praised by a local practitioner as a cure for psoriasis, which is usually characterized by an eruption widely distributed over the body, involving the skin from the heels to the head. I wish to utter a protest against the use of the X-ray where the diagnosis is uncertain and is so acknowledged by the "X-ray man." I do not think this is fair to the patient, and it is an unscientific use of a valuable remedial agent. I am not decrying the use of the X-ray. Dr. Butler's paper and pictures presented some time ago would be convincing to any one that it can do good. He dealt with it in a fair manner, reporting cases with bad results as well as the good ones.

I have one more case. A doctor brought in a patient from the country, a man 64 years old, with a history of frost-bite many years ago. He had an ulceration on the upper surface of the right ear which bled occasionally and had a recurrent crust formation. This man had been advised to use the X-ray treatment. The diagnosis of epithelioma was made. The X-ray applications would have had to be applied from thirty to fifty times and would have brought on a painful and obstinate dermatitis. Curettement was practiced and Michel's paste applied. In a few days the patient went home, and in four weeks, with little doubt, the cure will be complete. It is not the use of the X-ray but the abuse to which a protest.

DISCUSSION.

DR. THOMAS L. BUTLER: I feel called upon to defend the X-ray somewhat. The first case of which the doctor spoke is the only one with which I am familiar. I am free to say that I did not know what the condition was and told the people so. I was inclined to think it tubercular. I was urged by the doctor who asked me to see the case to try the X-ray, and I did so as an experiment, giving possibly two or three treatments. Then the case got out of my hands. In regard to this case, even though it was a bromide eruption, I believe that the application of the X-ray would have hastened the healing of the condition in a great degree. I have used the X-ray in quite a good many cases in which I could not make the diagnosis. Some of them had been to the skin men and not been relieved and had gone the rounds. I have two of these that are now well. I do not see why we should not use the X-ray even if the diagnosis is not positive. It is often difficult to tell whether the condition is tuberculosis, syphilis or carcinoma. Dr. Vance sent me a case which we thought was tubercular. It is well now and I cannot yet say what it was. I believe the X-ray can be used with care without any injury to the patient. I think I can say that safely. In the last three months I have given about three thousand treatments, and there is not a single case that has given me any concern as to burns. I try to burn some of them. Some of these cases need to be stimulated and the first case was one of that kind. I have yet to see a single superficial ulceration that has failed to heal rapidly under the X-ray. These old tubercular ulcerations which have lasted seven or eight years often heal in two or three months, and that is doing pretty well. In the case of a physician whom we all know, where it had

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existed for a year, it was healed in three weeks.

Of course the X-ray should be used properly. Four or five years ago I reported some cases of X-ray burns, three of which I produced myself. I took the ground then that these burns were the result of inexperience, and I say so now. The X-ray is not such a bugbear as many people think, for we can tell to a great extent just how much a patient can stand. We feel our way and give the treatment gradually. I think the results of so many treatments in the last three months uphold me in my statements. I have burned some of them, but none have failed to heal in a few weeks.

As to the third case, that of psoriasis, I do not know anything about that. I treat patients thirty days often, and have not had any trouble, but it should be done under proper precautions. I believe the tertiary syphilitic conditions heal more rapidly under stimulation by the X-ray, the constitutional treatment being carried on at the same time. I have tried it in only two cases of psoriasis. Many of these cases come to us and insist on our trying it to see what it will do. In one case, on the back of both hands and elbows, lasting for seven years, I got a complete cure on the hands. We cannot say whether it is permanent, as about 50 % of them recur in time.

Dr. I. N. Bloom: I approached this subject of the X-ray with great diffidence, lest I might say something that would hurt its exponents. There was no one that appreciated Dr. Butler's paper of some months ago and his spirit of fairness more than I did, and, though I did not discuss it that night, I gave him high praise without his knowing it. It is not my desire to criticise, but I feel that too much is claimed for the X-ray, and too much is done to inconvenience the patient by unnecessary suffering, prolonged dermatitis and so on, in diseases where better results could be obtained by ordinary methods, and at less expense of time and money. I believe that it is seldom that psoriasis cannot be cured for a varying time in three to five weeks. In twenty years I have seen at least five hundred cases, and my experience bears out that statement. It is especially easy on the back of the hand. We do not have to stop treatment more than a few days because of the dermatitis from chrysarobin. Ninety-five per cent. of the cases will have a return of the eruption sometime or other. I tell them I can get rid of the eruption, but that it will probably return in six weeks or in a few months or years. I have one case that went seven and a half years, and another man nine years, without recurrence. A girl I treated in '95 with the same formula had another attack in six weeks. I use chrysarobin in a solution of caoutchouc in chloroform.

It does seem to me that it is unscientific to take a case of anything that comes along and treat it without knowing what it is. I do not believe that it advances science or shows up the possibilities of the X-ray.

[CONTINUED FROM LAST MONTH.]

JEFFERSON COUNTY MEDICAL SOCIETY.

THE TIME OF THE OPERATION IN PRIMARY APPENDICITIS. (Continued.)

Dr. Wathen expressed the conviction that in the near future it will be the universal opinion that as soon as a diagnosis of appendicitis is made, operation will be demanded. If operation is not performed in the primary stage, there is not yet a consensus of opinion as to when it shall be done. Many think the best results are obtained by waiting until the abscess has been walled off. The speaker reported a case seen recently in consultation where death ensued because the operation was done soon enough. He thought it the duty of the surgeon in every abdominal operation to examine the appendix, and if there are any symptoms of inflammation, to remove it also, as this adds little to the danger of the operation.

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Dr. Horace H. Grant discussed the essay and thought the surgeons were fully in accord in the management of these cases, but the general practitioners were at fault. Unquestionably when these cases are seen before the inflammation has extended beyond the appendix, operation should be performed. It is almost as safe as operation in the interval. During recent years the speaker had been influenced in this opinion by the fact that one case which he had tided over an attack had escaped him in the interval. Patients often decline operation after the acute symptoms have subsided. Besides, it is impossible, even in a mild attack, to tell just exactly what the outcome will be. If all cases were operated on within the first twenty-four hours, the mortality would be very slight.

It is often impossible to operate in the early stage, for the diagnosis is not always clear until that stage has been passed. Then it becomes a question as to the best procedure. If the patient is doing well, and the affection is apparently retrograding, it is better to let them go on for two or three weeks and then operate. Those cases which are apparently improving for three or four days, and then become suddenly worse, generally die; operation is indicated, though the prognosis in this class is exceedingly grave. Dr. Grant thought the interval operation safer than the primary one, as it should not result in a mortality of more than 2 %. The primary operation has a greater mortality because in many cases the conditions are found much worse than they appear to be.

Dr. J. F. Purdom discussed the question from the practioner's standpoint, and said that as soon as he makes a diagnosis of appendicitis he calls for a surgeon; if in doubt as to diagnosis, he calls the surgeon. He strongly urged early operation, and thought this would greatly reduce the mortality of the disease.

Dr. W. H. Coleman inquired as to the adhesions and other sequellae of the operation.

Dr. W. H. Wathen replied that when the operation is done in the primary stage there will be no adhesions, because the inflammation has not extended beyond the appendix.

The medical paper was read by Dr. T. Hunt Stucky, entitled "Cardiac Tonics, Indications and Contra-Indications, with Special Reference to Digitalis," which will be published in the next issue.

EVENING SESSION.

INTESTINAL CANCER.

Dr. J. Garland Sherrill presented three specimens of intestinal cancer and reported the cases, as follows:

Specimen No. 1 was removed February 17, 1903, by operation, from Mrs. H., white; very anemic. She gave a history of repeated attacks of pain in the right iliac region, which were diagnosed as appendicitis. Was seen in one of these attacks January 3, 1903, at which time she presented a mass as large as an orange at usual site of the appendix, which was very like the mass so frequently met in suppurating appendices. A few days later she claimed to have passed some pus per rectum with slight amelioration of the symptoms, especially a lessening of the fever which had been present. At the time of the operation the mass was quite prominent, and at once after the incision was made it was seen that the condition was unusual. The tumor was enucleated, exposing a small abscess posteriorly at the point where the ulceration had perforated the posterior wall of the colon. The mesenteric glands were infiltrated and enlarged. The appendix was not involved in the process, although lying within an inch of the points of ulceration. An excision of the diseased gut was deemed the wisest course to be pursued, so this was done by an end to end anastomosis. She suffered greatly from shock and died on February 19 at 1 a.m. The specimen shows a perforation upon the posterior surface of the cecum. A fold

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of the ascending colon is adherent to the cecum at the site of the new growth, which is circular, about the size of a quarter, and presents in the colon as well as the cecum. The larger part of the mass felt through the abdominal wall was made up of the gut and the inflammatory tissue holding it to the abdominal wall.

The microscopical examination by Dr. Hayes shows the condition to be one of adeno-carcinoma of the intestine.

Specimen No. 2 was removed from Mr. P., white, aged 54, who came to me from West Virginia, May 15, 1903, to be relieved of a fecal fistula in the right side of the abdomen. This fistula had persisted since September last, when he was operated upon for a supposed appendicular abscess. He was light in weight, very anemic, and walked with body bent, owing to pain in his right side. Examination shows a fistula about half-way between the ribs and Poupart's ligament, in line of linea semilunaris. Immediately surrounding the fistula there is a tumor about the size of a cocoanut, adherent to the abdominal wall, but movable from the deeper structures. Diagnosis, cancer of the intestine. Urine normal, blood shows 75 % hemoglobin.

The mass consisted of a number of gelatinous nodules on the colon, attached to and infiltrating the omentum and the abdominal wall. These nodules vary in size from a pea to that of an egg. The specimen shows an appendix distended at each end with a contraction in the middle, probably the result of an old inflammation. It also presents a small nodule upon the appendix.

The report by Dr. J. E. Hayes shows that this specimen is a gelatinous (Ziegler) cylindrical celled carcinoma. A very unusual growth.

Specimen No. 3 was removed June 3, 1903, from a man 57 years of age. The symptoms began about three months before operation, following an injury, and pain developed in the last few weeks. It did not grow very rapidly after he saw it, and the diagnosis of tumor was made, probably a sarcoma. The mass was then extra-peritoneal, and the danger of the operation was explained to him, but on account of the pain he requested operation. In enucleating the tumor the external iliac vein was torn, but easily clamped. The wound was packed with gauze, and patient has done very nicely. The tumor was either an angio-sarcoma or an epithelioma.

Cancer in this region is much more common than is generally supposed. Out of 69,000 autopsies the percentage of cancer was 8.4 %, and of this number 32.35 % were intestinal. Some of its symptoms simulate appendicitis.

Dr. Louis Frank, in discussing the cases, said that cancer of the bowel occurs with the greatest frequency in the region of the ilio-cecal valve. In looking up the subject he was surprised to find that 35 % of all cases died from the operation itself. He thought the best results are obtained, first, from the direct suture method, and, second, from the use of the Murphy button. The worst results are obtained from the use of other mechanical devices. The surgeon who opens the abdomen should always be prepared for any condition which he may chance to meet. He did not think Dr. Sherrill's cases should be discredited because they did not live out the three years time. Even if a few patients are saved by operation, that much is accomplished. Referring to Dr. Hayes' statement that there is no such thing as a colloid tumor, Dr. Frank had seen cases resembling that form, especially in the intestines. If there be such a thing as a colloid tumor, he would call this one of that class.

Dr. Irwin Abell was also of the opinion that one of the tumors partook of the character of a colloid. All of the other cases he had seen had been from the omentum.

Dr. J. B. Bullitt doubted very much whether operation in these cases really gave patients their best chance. He questioned the advisability of operating

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for anything more than to establish a a fecal fistula. He thought attention should be called to the use of the X-ray, which had apparently held out hope for these cases. Some hopeless cases had been apparently cured by its use, though it was too early to come to any definite conclusions.

If the diagnosis can be made early, the speaker thought this one of the best regions of the body in which to operate.

Dr. J. G. Sherrill closed the discussion. The second case had come from a long distance to be relieved of a fecal fistula, not knowing that he had a cancer, and the surgeon had gone into it with his eyes open. Referring to the first case, he said that the peculiarity was that the lymphatic involvement was not due to the carcinoma, but to inflammatory enlargement. On the other hand, sarcomata are characterized by lymphatic enlargement. If sarcoma affects the gut at all it is usually the small intestine.

SUPRA-RENAL EXTRACT IN THE EAR, EYE AND NOSE.

Dr. S. G. Dabney read the first paper of the evening on "Some Uses of the Supra-Renal Extract in the Eye, Ear and Nose," to be published in the next issue.

MALARIA VERSUS SEWER GAS POISONING.

Dr. Leon L. Solomon read an essay on "Malaria versus Sewer Gas Poisoning." This will be published in the next issue.

The Society adjourned for the banquet.

Current Literature.

Nancrede & Hutchings, Ann Arbor, Mich.: Sterilization of Catheters, a Bacteriologic Study.—*Medical News*, Nov. 23, 1902.

This is a complicated subject and the work of these investigators is timely. In all sixty-five experiments were made, and the following are their conclusions:

1. An infected soft rubber catheter cannot be completely sterilized by boiling under four and one-half minutes.

2. Mechanical cleansing from all dried pus, coagulated blood or mucus will render sterilization easier and will demand a shorter time to be effective.

3. Elastic (English web) catheters and soft rubber catheters can be repeatedly boiled for five or more minutes without roughening of their surfaces or or diminution of their elasticity and strength.

4. Chemical sterilization by immersion in a 1.2000 mercuric chloride solution for five minutes does not sterilize any variety of catheter which has become infected, at best only inhibiting the growth of the germs, for if the mercuric salt be precipitated by ammonium sulphide the germs will grow freely when implanted in culture media.

5. The results of experiments, as stated in the previous conclusion, indicate that chemical sterilization should never be employed for catheters which are to be retained in the bladder for any length of time, unless subjected to a very prolonged action of the mercurial salt, lest the merely inhibited germs develop.

6. Should corrosive sublimate be employed for the sterilization of catheters, it must be in a concentrated solution, and the catheter must remain in it for a much longer time than the usual period considered amply sufficient in the laboratory, no mere washing with any chemical solution being efficient for *an infected instrument.*

7. Formalin vapor will sterilize infected instruments in twenty-four hours; how much shorter time will be sufficient we have not as yet determined, but propose to do so in the future.

8. All methods of sterilization commonly employed should be continued for much longer periods than the minimum time required for destruction of germs in the laboratory.

9. English web catheters can apparently be more readily sterilized by heat than can soft rubber catheters, probably on account of their interior construction.

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Louisville Monthly Journal

OF MEDICINE AND SURGERY.

"Alis Volat Propriis."

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EDITORIAL STAFF.

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A. M. CARTLEDGE, M.D.
H. HORACE GRANT, A.M., M.D., Business Editor.
HENRY ENOS TULEY, A.B., M.D., Acting Editor.

PUERPERAL SEPTIC INFECTION.

Statistics show a wide prevalence of puerperal septic infection. It has been reduced to a minimum in maternity hospitals, almost wiped out, but it occurs with frequency in private practice. This is unquestionably due in a measure to the average surroundings in a private house, but to a greater extent to unpardonable errors in aseptic technic on the part of the obstetrician and the midwife. Until the rank and file appreciate the importance of the strictest asepsis and a non-interference policy in the majority of cases, sepsis will continue prevalent. The prevention, where possible, of lacerations which open up avenues of absorption; constant watchfulness of the gastro-intestinal tract, antiseptic precautions during and after labor, and the abolishing of ante and post-partum douching will assist toward this end.

The treatment of puerperal septic infection, if misdirected because of the zeal and anxiety of the attending physician, may convert a mild case into a most severe one. The advice of some to thoroughly explore the whole parturient canal upon the first rise in temperature, we think unwise and unsound. Prolonged irrigation of the uterus and vagina with a saline or lysol solution may be practised, but universal curettage is not to be advised. Free catharsis, a light, concentrated diet, cold to the abdomen, careful and intelligent nursing, will bring better results than the more active treatment. Antistreptococcic serum, nuclein to produce leukocytosis (Davis, *Philadel. Med. Jour.*, May 23, '03), hysterectomy of the septic uterus, are remedies which must be considered experimental. Among those remedies which Davis considers injurious may be mentioned the reduction of temperature by drugs, over zealousness in stimulating the heart, interference in septic diarrhea, the use of hypnotics, repeated intra uterine manipulation and the use of mercurial preparations in the uterus.

RENAL DECAPSULATION.

Renal decapsulation for puerperal eclampsia is the latest treatment advised by Edebohls (*New York Medical Journal*, June 6, '03). He reports one case in a primipara, aged 23; typhoid fever during the fourth month of pregnancy; symptoms of nephritis first noted during the seventh month; uremia and eclamptic seizures near the end of eighth month; five severe convulsions within sixteen hours, followed by forced delivery during fifth convulsion; freedom from convulsions for forty-six hours after delivery; then return of convulsions, six severe convulsions, not counting minor manifestations, occurring in eighteen hours; decapsulation of both kidneys; no further convulsions, and rapid restoration of complete health.

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In the light of the theories as to the cause of this dreaded trouble, it might prove disastrous were the operation of decapsulation of the kidney recommended and practiced in all cases, as the liver, the thyroid gland, the suprarenal glands, have all been accused as being an accessory in the causation. Its use only in those cases of nephritic origin is recommended, but we can hardly draw the line very closely as to these cases.

MEDICINE AS A PROFESSION.

This is the title of a special article in the June 6 issue of the *Philadelphia Medical Jaurnal.* The statements made are weighty ones and should be considered by those contemplating the study of medicine or those about to graduate. It suggests the means of support offered the graduate. The average income of a physician is small; teaching positions pay poorly; the rewards of medical literature are light; institutions pay small salaries or none; insurance companies offer a limited number of positions but pay better; the army and navy offer a livelihood to a few, and the large drug houses employ a few experts.

The average time of preparation for medicine is five years, at at least $500 per year; the remuneration of the average young medical man is poor, and he has reached middle life before he earns expenses.

Notes.

The Cincinnati Sanitarium has sustained a great loss in the death of its Medical Superintendent, Dr. Orpheus Evarts, which occurred after a lingering illness, June 19th. He had been at the head of the medical staff for twenty-four years. Dr. B. A. Williams will be retained as Medical Superintendent, and Dr. F. W. Langdon as special consultant.

Dr. Jos. M. Mathews, after twenty-five years active college work, has resigned as Professor of Surgery and Clinical Lecturer on Diseases of the Rectum in the Hospital College of Medicine, this city. Dr. Mathews will devote his time more to literary work and travel, and to his practice.

County Societies.

The twelfth annual session of Russell Springs Medical Society will be held at Russell Springs, Ky., August 13 and 14, 1903. The following papers will be read:

Etiology and Treatment of Typhoid Fever, W. R. Grissom, M.D., Columbia, Ky.

Scarlatina, L. Hughes, M.D., Faubush, Ky.

The Two Theories of Malaria Reconciled, Wm. Blair, M.D., Glensfork, Ky.

Ilio-colitis, L. F. Hammond, Dunnville, Ky.

Uses of the X-ray, J. B. Kinnaird, M.D., Lancaster, Ky.

Epidemic Dysentery, U. L. Taylor, M.D., Columbia, Ky.

Diphtheria, W. T. Garner, M.D., Humphrey, Ky.

Business End of Medicine, J. C. Barker, M.D., Hustonville, Ky.

Criticism on the Lorenz Method 1st day, and the Early operation for Appendicitis 2d day, J. G. Carpenter, M.D., Stanford, Ky.

Fractures, I. S. Wesley, M.D., Liberty, Ky.

Malaria, S. G. Cain, M.D., Pendletonville, Tex.

Report of Cases, J. A. Bolin, M.D., Somerset, Ky.

Subject not mentioned, J. D. Hammond, M.D., Irvinstore, Ky.

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The Microscope in Diagnosis, J. M. Owens, M.D., Somerset, Ky.

Report of Cases, A. W. Cain, M.D., Somerset, Ky.

Progress of Medicine, Steele Bailey, M.D., Stanford, Ky.

Mammary Abscesses, Bertie R. Carpenter, M.D., Hustonville, Ky.

Can the General Practice of Obstetrics be Improved? J. T. Wesley, M.D., Middleburg, Ky.

What Must the Country Doctor Do With His Surgical Cases? G. M. Reddish, M.D., Somerset, Ky.

Dr. J. B. Scholl, Jabez, Ky., is Secretary.

The sixteenth semi-annual session of the Kentucky Valley Medical Association was held at Torrent, Ky., June 25 and 26, 1903. This was one of the largest and most interesting meetings in the history of the Society. Several of the most prominent doctors in the State were present. The papers read were as follows:

The Management of the Third-Stage Labor, C. D. Mansfield, M.D., Stanton, Ky., to be published in a subsequent issue.

Preventive Medicine, F. M. Greene, M.D., Lexington, Ky.

Phlebitis, G. S. McDonald, M.D., Beattyville, Ky.

Cancer of the Pancreas, J. McClymonds, M.D., Lexington, Ky.

Senile Gangrene, G. M. Centers, M.D., Hazel Green, Ky.

Medical Organization, I. A. Shirley, M.D., Winchester, Ky.

Treatment of Eclampsia, S. W. Willis, M. D., Jasper, Ky.

J. B. Bullitt, M.D., Secretary of the Kentucky State Medical Association, also made a very intercsting talk on Medical Organization.

The K. V. M. A. is one of the largest and most active district societies in the State and is growing rapidly. The next meeting of the Society will be held at Stanton, Ky., October 15 and 16, 1803.

B. Littlepage, M.D., is Secretary.

The regular meeting of the Campbell and Kenton County Medical Societies was held July 16, at Speers' Hospital, Dayton. Dr. C. B. Schoolfield, President, Dr. F. A. Stine, Secretary. Dr. John Loomis read a paper upon "Lobar Pneumonia," and Dr. G. Ragon on "Cerebro-spinal Meningitis."

The regular meeting of the Daviess County Medical Society was held Tuesday, June 16, at Masonville. Dr. J. J. Rodman, Secretary, Dr. S. J. Harris, Philpott, President, and the guest of Dr. J. W. Ellis.

Forty two physicians were present. Six physicians made application for membership.

Dr. T. H. Turner reported a case of Erysipelas. Dr. J. J. Rodman read a paper on "Exophthalmic Goitre." Dr. W. F. Stirman, reported "Nine Successful Operations for Appendicitis."

Dr. Jacob Glahn read a paper upon the X-ray (see July issue). Dr. C. H. Todd, in discussing this paper, said, in part, that the paper was written on a high scientific plane. He emphasized the importance of physiology, stating that every organ and tissue in the human body is made up of cells, and each cell is composed of a number of molecules, a gas, the properties of which are heat, light, motion, electricity, magnetism, dynamic or explosive action, etc. When it is recognized that the molecule, a typical gas, with its properties, centers into the chemical action of resolution pertaining to physical life, then we have the key to the mechanism of the X-ray treatment.

The Fayette County Medical Society held its regular monthly meeting in the Court House, at Lexington, June 9.

A symposium on Syphilis was presented—Dr. Ravitch reading a paper on "Syphilis of the Skin and Local Lesions;" Dr. McClymonds, on "Syphilis of Special Organs;" Dr. Sprague, on "The Nervous Complications of Syphilis," and Dr. Bosworth, on "The

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Prophylaxis and Treatment of Syphilis."

Dr. Ravitch showed a negro with lupus vulgaris of almost the entire right side of the face. It had been cauterized several years before, but had been enlarging ever since.

Dr. McClure reported for the Milk Commission. He said that arrangements had been made with Prof. Scovill, of the State College Experiment Station, to supply certificated milk to any one in the county, upon physician's prescriptions, at the following prices: with 5 % of fats, 10c a quart; with 3 %, 12½c a quart; 12 %, 25c a quart, etc.

Dr. Stucky exhibited cystic turbinated bones, and reported the operation for their removal.

Dr. Mulligan said that the Society should have a medical library, and that it might be possible to secure quarters in the new Carnegie Library, and a committee was appointed to confer with the Library Trustees in regard to the matter.

The Jessamine County Society meets the third Thursday of each month. Dr. F. R. Welch will be the essayist at the August meeting.

Dr. D. A. Penick, a member of the Society, was married June 30 to Miss Ella M. Jordan, of Washington.

The Christian County Medical Society held its regular meeting July 20 with a good attendance.

The Henry County Society met on June 23 with eight members present. No paper was read.

The Hardin County Medical Association met at Elizabethtown, Thursday, July 9, with fifteen members present.

Dr. D. C. Bowen reported an interesting case of puerperal eclampsia coming on in a young primipara three hours after delivery, and who died six hours after first convulsion.

Dr. Bowen's case was thoroughly discussed, and then the Association took up the subject of Diarrheas of Children, which was selected for study at the regular meeting in June.

The County and District Associations meet together in August, and the attendance is usually twenty-five or thirty.

The Hardin County Society has an enthusiastic membership. By a united effort this Society has almost succeeded in forcing the life insurance companies, which only pay $3 for examinations, out of business in the county.

The Caldwell County Society has sixteen members. It regular meeting was held July 7.

Book Reviews.

Essentials of Diseases of the Ear.

By E. B. Gleason, S.B., M.D., Clinical Professor of Otology, Medico-Chirurgical College, Philadelphia; Surgeon in Charge of the Nose, Throat and Ear Department of the Northern Dispensary, Philadelphia, etc. Third Edition, Thoroughly Revised. 16 mo. volume of 214 pages, with 114 illustrations. Philadelphia and London; W. B. Saunders & Co., 1902. Cloth, $1.00 net.

This valuable little help, one of Saunders' Question-Compend Series, has reached its third edition. The book will be found of service, not alone as an aid to the student, but also to the physician who wishes to take a post-graduate course in Otology, enabling him, as it does, to acquire the rudimentary facts of the science with as little preliminary reading as possible.

The essentials of Otology have been stated concisely, without sacrificing accuracy to brevity, The diagnosis and treatment of diseases of the ear have been brought absolutely down to date by a thoroughly scrupulous revision; only such methods of treatment being included, however, that have personally proved efficacious in the majority of cases. Besides carefully revising the old text, many interpolations of new matter have been made, thus

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somewhat increasing the number of pages in the present edition.

The illustrations—many from original drawings—have been selected with the aims of the book constantly in view; and they form a very commendable feature of the work. Indeed, the little volume before us will unquestionably continue to be one of the most popular of Saunders' unequaled Question-Compend Series.

Essentials of Histology.

By Louis Lerry, B.S., M.D., Professor of Histology and Pathology, Vanderbilt University, Medical and Dental Departments; Pathologist to the Nashville Hospital, etc. Second Edition, Thoroughly Revised and Greatly Enlarged. 16 mo. volume of 263 pages, with 92 beautiful illustrations. Philadelphia and London; W. B. Saunders & Co. 1902. Cloth, $1.00 net.

This valuable work has been designed not only as an aid to the beginner, but also to help the practitioner who, having graduated at a time when histology was not taught in all the colleges, desires to gain sufficient knowledge of the subject to facilitate his better understanding of pathology. Both these aims it admirably fulfills, as he evidenced by the demand for a second edition in so short a time.

In this edition a number of new original illustrations, most photomicrographs, have been inserted to better elucidate the text. The chapter on Technic has been enlarged, a description of the appendix and rectal valves added, and the entire chapter, as, indeed, the entire book, thoroughly and carefully revised. As did the first edition, the work in its present form stands as a model of what a student's aid should be; and we unhesitatingly say that the practitioner as well would find a glance through the book of lasting benefit.

A Compend of Human Physiology.

By Albert P. Brubaker, A.M., M.D., Adjunct Professor of Physiology and Hygiene in the Jefferson Medical College, etc., Philadelphia. Eleventh Edition, Revised and Enlarged, with Illustrations. Philadelphia. P. Blakiston's Son & Co., 1902.

This little book of 265 pages is specially designed as an assistant to the medical student as a guide and help to his mastery over the more elaborate text-books. It is a thorough and careful exposition of the subject, and its popularity will continue.

A Treatise on Diseases of the Rectum, Anus and Sigmoid Flexure.

By Joseph M. Mathews, M.D., LL.D., President American Medical Association, 1898: Professor of Surgery and Lecturer on Diseases of the Rectum, Hospital College of Medicine, Louisville, etc., etc. With six chromo-lithographs and numerous illustrations. Third edition, revised. New York: D. Appleton & Co. 1903.

Three editions of this work in ten years evidences its popularity. The number of excellent treatises upon this subject in the past few years emphasizes the importance to which this specialty has grown. This must be a great source of satisfaction to the author of this work, the pioneer specialist in diseases of the rectum in this country.

With new workers in this field there have been many new ideas and operations developed, many being included in the present edition. The "rectal valve" has been a source of contention among the proctologists for some time. The author admits their existence as an anatomic fact, but does not admit that their office is that of a valve or that they obstruct in a physiologic state, becoming pathologic only by the process of irritation and inflammation.

As to the operation for hemorrhoids the author adheres to his previously expressed preference for the ligature, though he describes an original operation in which he utilizes a clamp with curved blades, excises the mass, and approximates the surfaces by the shoemaker stitch. He also shows a hemorrhoidal clip which is left in situ after removal of hemorrhoidal mass, and removed in forty-eight hours.

Among the other original operations suggested by the author are a colopexy for an immense prolapse of the rectum, a plastic operation for pruritis ani, and an operation for prolapsus ani of lesser degree.

The book is written in the first person, in the attractive style possessed by the author, and will continue to be one of the most sought for books upon this subject. T.

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Original Communications.

GLAUCOMA.*

BY T. C. EVANS, M.D.,

Professor of Ophthalmology, Laryngology, Otology and Rhinology, Kentucky University, Medical Department,

LOUISVILLE, KY.

Priestly Smith defines glaucoma as an excess of pressure within the eye, plus the causes and consequences of that excess. The excess of pressure, or tension, is due to derangement of the circulation of the intraocular fluids. The derangement of circulation may occur in a number of ways. When it takes place in an eye that is otherwise apparently normal and shows no evidence of antecedent disease, the glaucoma is said to be primary; when it occurs as the result of some antecedent injury or disease, the glaucoma is said to be secondary.

The intraocular fluids contained in the aqueous and vitreous chambers is of practically the same consistency; it contains about 99 % of water and 1 % of salts and extractives and a trace of albumin. The study of glaucoma requires a knowledge of the processes by which these intraocular fluids are secreted, circulated and excreted. The ciliary body with the ciliary processes secretes the fluid which nourishes the vitreous and lens and replenishes the aqueous chamber. Most of the fluid passes into the anterior chamber and escapes by filtering through the pectinate ligament into Schlemm's canal. A small amount escapes through the iris, entering the openings on its anterior surface. A small portion also passes into the vitreous humor and escapes through the lymphatics around the retinal vessels. The normal intraocular pressure equals that of a column of mercury 28 millimeters in height, and presents no appreciable difference in the two chambers. This pressure is so regulated as not to embarrass the circulation of the blood or the nutrition of the tissue within the organ. It would seem plausible that this regulating power which normally maintains a uniform degree of tension, is the result of nervous influences, but how and to what extent tension is influenced by the nervous system is still a matter of speculation.

Now as to the causes of increased intraocular pressure, it may be said that the liability to glaucoma increases with age, and that primary glaucoma is rarely seen in patients under 30 years of age. It is most commonly seen between the ages of 60 and 70. Women are more often affected than men. A few striking instances of heredity have been reported, but on the whole heredity seems to play a very insignificant part. Certain races seem to be more frequently affected, notably the Jews and the Egyptians. It is the prevailing opinion that hypermetropic eyes are predisposed to glaucoma, but more recent investigations fail to confirm this point.

Priestly Smith has proven conclusively that eyes with small cornea are predisposed to primary glaucoma; he

* Read before the Medico-Chirurgical Society. (For discussion see page 158.)

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has also established the fact that a small cornea means a small eyeball. In this connection he says, "Primary glaucoma appears usually to depend on some vascular disturbance which congests the uveal tract, or upon a faulty relation of the lens to the parts around it, or upon both. If the patient be elderly, we know that the lens is relatively large. If the cornea be small we infer that the whole eyeball is small, and that the relations of the lens are such as to predispose to compression of the filtration angle, especially during dilatation of the pupil. An obstruction in the region of the hyaloid and the circumlental space, which checks the escape of surplus fluid from the vitreous and leads to an advance of the lens, appears to be present in many cases. Slackness of the zonula, with consequent instability of the lens, is probably a contributary cause. Through one or other of these causes, or several in combination, the ciliary processes are pressed against the iris, and the filtration angle is narrowed or closed."

Depressing emotions, mental anxiety, worry and loss of sleep very frequently precede attacks of glaucoma. The use of mydriatics, especially atropine, may incite an attack in an eye that is predisposed to glaucoma. Panas, Jonnesco and others look for an explanation of the increased tension in glaucoma to some disturbance in the controlling action of the nervous system and the intraocular pressure. As the consequences of increased intraocular pressure, we may have derangement of almost every tissue and structure of the eyeball with disturbances of their functions. The symptoms and lesions vary according to the suddenness, duration and degree of increased tension. A sudden onset of increased tension causes a general congestion of the ciliary vessels in the sclerotic and conjunctiva. In most acute cases this congestion is accompanied by conjunctival chemosis and by edema of the eyelids. When the onset is gradual the violent disturbances resulting in congestion and edema does not take place. The effect of increased tension on the sclerotic varies according to age. In early life the sclerotic is an elastic structure, consequently increased tension results in elongation of the globe. After adolescence little alteration in the size and shape of the globe results from increased tension. As the result of tension, interference with the lymph stream of the cornea may occur, especially if the onset is sudden. The effect of this is to cause more or less edema of the corneal structure with superficial haziness. Compression of the nerve fibres leads to anesthesia of the cornea. Iridescent vision, a characteristic symptom of glaucoma, is due to haziness of the corneal epithelium.

The condition of the anterior chamber varies with the positions at which the original obstruction in the circulation of the intraocular fluid takes place. In primary glaucoma it is shallow and due to increase of tension in the vitreous chamber; the lens and its suspensory ligament being pushed forward. The anterior surface of the root of the iris is pressed against the posterior surface of the cornea with partial or complete occulsion of the angle of the anterior chamber. In some cases of secondary glaucoma, and the congenital form of the disease, the original obstruction is at the angle of filtration. In these cases the anterior chamber becomes deepened. Pressure of the root of the iris against the posterior surface of the cornea causes compression of both its blood vessels and nerves, leading to engorgement and discoloration, followed by atrophy. Pressure on the ciliary nerve in acute cases causes paralysis of the muscles of the iris with a dilatation of the pupil. When the cornea and the root of the iris have been in apposition for only a short time their separation is easily affected. Prolonged apposition results in exudation with permanent adhesion. In chronic glaucoma where the onset has been gradual the dilatation of the pupil and other iris symptoms may be absent.

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Increased tension interferes with the action of the ciliary muscles by pressure on the ciliary nerves and manifests itself in the loss of accommodation and premature presbyopia. Persistent and long continued intraocular pressure results in atrophy of the choroid. This atrophy is more marked around the optic disc and the exit of the vortex vein. In primary glaucoma the lens with its suspensory ligament is displaced forward. Its nutrition is disturbed and it may become cataractous. Under normal conditions the intraocular pressure and the blood pressure in the retinal vessels are so well balanced that no arterial pulsations are perceptible. When the intraocular pressure is much increased this balance is disturbed. Blood then can force itself into the retinal arteries only during contraction of the heart, and pulsation is visible in the retinal arteries near the disc. The retinal vessels become sclerosed from long-continued intraocular pressure, resulting in hemorrhages into the retina. Disturbances of the function of the retina may be due to diminished blood supply, or to atrophy of its nerve fibres. The point at which the optic nerve enters the globe is the weakest spot in the eyeball. At this point instead of the three tunics there is only the lamina cribrosa, which is only about one-half the thickness of the sclerotic coat, and is composed largely of yellow elastic tissue. With increased intraocular pressure this point yields and gives rise to the characteristic cupping of the optic disc. The sclerotic coat surrounding the disc is firm and unyielding as the lamina cribrosa is pushed backward; the continued intraocular pressure compresses the nerve fibres against the sclerotic margin, producing atrophy.

Clinically, primary glaucoma is divided into acute congestive, subacute and chronic or noncongestive. No hard and fast rules can be drawn to differentiate these types from each other. The different types merge into each other, and the symptoms vary according to the mode of onset of the disease. Usually the acute congestive form succeeds one or more subacute attacks, or it may follow the chronic form, whether preceded or not by an intermittent state the attack is suddenly ushered in by a violent and excruciating pain in the eye, and the corresponding side of the head, with dizziness, vomiting, fever, and perhaps loss of consciousness; the lids become edematous, and the ocular conjunctiva reddened and chemotic; the cornea is decidedly hazy; the pupil is dilated and does not respond to light; there is some discoloration of the iris, and more or less turbidity of the aqueous and vitreous humors; vision is greatly impaired, the anterior chamber is shallow, and palpation shows decided hardness of the eyeball. The intensity of the symptoms in acute glaucoma, and the rapidity of their onset vary widely.

Glaucoma fulminans is the name applied to an aggravated form of the acute disease in which the symptoms may be fully developed in a few hours without a prodromal stage. There is no remission, and the destruction of vision is swift and permanent. Subacute attacks of glaucoma may precede or succeed an acute attack, or they may occur independently. In subacute glaucoma the symptoms are similar in character to those in the acute, but of less severity. The pain is confined to the eye and is neuralgic in character, the patient complains of iridescent vision. The injection of the eye is not intense; there is a slight haziness of the cornea, pupil is semi-dilated and sluggish, the anterior chamber shallow. The ophthalmoscope shows cupping of the optic disc, and the tension is not as great as in the acute form of the disease. Subacute glaucoma is characterized by its intermittency; the recurrences become frequent and severe; the remissions less complete, and gradually a persistent glaucomatous condition is established.

Chronic or simple glaucoma begins almost imperceptibly, progresses slowly with little tendency to exacer-

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bation and remission, and leads in the course of months or years, unless arrested by treatment, to total blindness. It usually develops after the fiftieth year. One eye is usually affected before the other, but in a large majority of cases the second eye is involved sooner or later. Externally the eye exhibits no signs of disease, except a slight engorgement of the anterior ciliary vessels. The anterior chamber may be shallow, but not markedly so, considering the age of the patient. The pupil may be slightly dilated or sluggish, but this condition is by no means constant. On simple inspection the lens appears opaque, but with the ophthalmoscope the fundus is clearly visible. The tension of the eyeball is increased, at first very slight, but in the latter stages it may amount to almost a stony hardness, but by reason of its slow advance there is still no pain and little external evidence of disease. The optic disc is cupped; the range of the accommodation is small; vision is impaired and the field typically contracted. In the absence of decided tension chronic glaucoma may be mistaken for simple atrophy of the optic nerve.

The treatment of glaucoma is essentially surgical. This is especially true of the acute and subacute variety. The urgency for operative interference varies with the acuteness of the disease. The operation now universally recommended is iridectomy. An intense attack may in a few hours reduce vision to light perception. An operation promptly performed may restore it almost to normal. Just in proportion to the brilliancy of such a result is the danger of delay.

In subacute glaucoma also an early operation is important. Each recurrence diminishes the chance for useful vision. In chronic glaucoma operative interference does not offer such brilliant results. The choice of treatment in chronic glaucoma is a matter calling for both judgment and experience, it being necessary to take into consideration the patient's circumstances, general health, age and other matters.

Positive improvement after an operation is seldom to be expected, the most that iridectomy can do is to prevent further loss. Some surgeons doubt the propriety of iridectomy in simple glaucoma, and depend upon myotics and constitutional medication. Bull's advice, after all the chances of success and failure have been fairly stated, is to operate in cases of chronic progressive glaucoma, and the earlier the better. He attributes many of the disastrous results which have been credited to operative interference in this disease, to failure to properly distinguish optic nerve atrophy with excavation from chronic simple glaucoma, and to an unreasonable delay in operating. In a certain number of cases iridectomy is followed by malignant glaucoma. For this reason Schweigger advises in cases of chronic glaucoma affecting both eyes to operate first on the right eye. In regard to the operation itself, it may be said, that general anesthesia is usually necessary, or at least desirable. The high tension of the eyeball limits the action of local anesthetics. The operation is exceedingly difficult on account of the shallow anterior chamber and the haziness of the cornea, and no precaution should be omitted in order to secure perfect quiet on the part of the patient.

De Schweinitz gives the following points to be observed in performing the operation: "(1) About one-fifth of the iris should be excised, the detachment being made up to the periphery by cutting first one side of the portion of the iris which has been drawn out of the wound, then dragging it across to the other angle and completing the excision, thus removing everything up to the ciliary border. (2) The wound should be sufficiently large to permit of such extensive detachment of the iris. (3) The point of selection for the entrance of the karatome should lie in the sclerotic coat, about 2 mm. from the apparent border of the cornea. (4) The

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knife should be withdrawn slowly in order to prevent a sudden gush of aqueous humor, and a too rapid reduction of tension, which might be followed by intraocular hemorrhage. (5) Great care must be taken that no portion of the excised iris remains in the angles of the wound. (6) A preliminary scleral puncture, as has been advised by Priestly Smith and Gifford, is most useful, especially if the tension is exceedingly high and the anterior chamber very narrow." Scleral puncture is rarely performed except as an adjunct to iridectomy. Paracentesis affords a temporary relief of tension, and may sometimes be employed in cases of emergency.

Removal of the superior cervical ganglion of the sympathetic has been shown by Jonnesco to be an operation capable of reducing the tension in glaucoma. He reports the following summary in eight cases: First, immediate and lasting reduction of tension; second, marked and permanent contraction of the pupil, even in cases in which iridectomy had been previously performed; third, absence of frontal headache; fourth, disappearance of the attack of irritative glaucoma; fifth, considerable permanent improvement in vision in all cases in which complete atrophy of the nerve had not set in. Other surgeons, however, have not obtained such favorable results from the operation. In some cases the operation has terminated fatally, in others there has been flushing of the face and severe pain after the operation. Exophthalmos and tachycardia are also attributed to the operation. Increased tension returns in some cases.

The non-surgical treatment of glaucoma consists principally in the local administration of myotics—eserin is the main reliance; this is usually prescribed in solutions varying in strength from ½ to 1 grain to the ounce. In order to overcome its irritating effects, it is frequently combined with cocaine. Myotics are serviceable in the prodromal stage of acute glaucoma, or when for any reason an immediate operation is impossible. They are also useful in simple glaucoma in which an operation is contraindicated or rejected by the patient. Before performing iridectomy in unilateral glaucoma, it is always advisable to instill a myotic into the normal eye as a prophylactic measure.

Morphine in small doses will sometimes be necessary. It eases pain, induces sleep and promotes the contraction of the pupil. Palliative treatment is useful chiefly as a means of allaying the severity of the symptoms, of gaining time and of bringing the eye into a condition for operative interference. The immediate benefit must not, however, be permitted to outweigh the fact that in a vast majority of cases permanent relief is obtainable only by an early iridectomy.

APPENDICITIS FROM THE STANDPOINT OF THE PATIENT.

BY SAMUEL G. DABNEY, M.D.,
Professor of Ophthalmology and Clinical Professor of Otology and Laryngology in Hospital College of Medicine,
LOUISVILLE, KY.

I am 42 years old, and have been in the main in good health. For several years, however, I have been annoyed from time to time by flatulence coming on soon after eating and lasting an hour or two. On a few occasions I have had attacks of slight diarrhea, with a good deal of abdominal distention and discomfort. Two or three of my friends have prescribed at different times for this, and have agreed that the symptoms were due to intestinal indigestion. My bowels have generally been regular, and I have rarely used laxatives.

About six weeks before my attack of appendicitis, however, I took some tablets for a cold. These tablets contained one grain of calomel. That night I was taken suddenly with intense pain in the abdomen. It was relieved by an enema, but for a short time—perhaps fifteen or twenty minutes—the pain was most severe. None of these

*Read before the Medico-Chirurgical Society, June 12, 1906. For discussion see page 150.

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attacks was sufficient to interfere with my usual professional work.

On Monday, April 13, about an hour after my dinner, that is, about 3 in the afternoon, I felt a sudden sharp pain in the abdomen in the region of the umbilicus. I continued with my work, and that evening went to the theater with my daughter. I remarked to her, however, that I would have enjoyed Mansfield more but for the pain in my stomach.

This pain was not constant, but occurred at brief intervals, and gave the sensation of waves of pain rolling across the abdomen. It was not localized especially in any one point, and that night there was no abdominal tenderness. The discomfort, however, was sufficient to make my sleep restless and interrupted.

Thinking there might be some offending material in the intestine, I took a laxative, containing senna, which acted the next morning. For the next two days I ate very little, rather because I thought my attack was indigestion than from any marked loss of appetite.

Tuesday morning the abdominal discomfort was still present, but not very painful. I went to the infirmary and to see one or two patients at their homes and as usual to my office.

It was rather a busy day with me, and I paid little attention to the waves of pain which from time to time would roll over my abdomen. That afternoon, however, I did not go to my college lecture, but remained at home. That night, about thirty hours after the sudden onset of the disease, the pain, still not severe in character, localized itself in the right iliac region, and there was slight tenderness to pressure in the same spot. I used an enema, but with no satisfactory result. I did not feel feverish nor weak, nor was the pain sufficient to do more than make my sleep broken and restless. Under these circumstances I did not think it necessary to send immediately for a physician.

Early next morning (Wednesday) Dr. Leavell called to see me and confirmed my suspicions that I had appendicitis.

My pulse at this time was 88, temperature in the mouth 99°, pain in the iliac region frequent but not severe, and tenderness to pressure perceptible but not acute.

Dr. Leavell told me, wisely of course, that the first essential of treatment was rest. For my going out that morning I wish to take the responsibility entirely on myself. I promised to go in a coupe, which would be easier than my own carriage, to observe myself carefully, and to come home immediately if the symptoms became more decided. Dr. Leavell gave me an enema, but there was very slight fecal discharge.

I visited a patient just across the street from my home, drove to the Gray-street Infirmary and saw two cases of mastoid disease, but did not operate; then went to my office and treated several patients.

By 11 o'clock I observed the pain was becoming more acute, my pulse quicker and temperature over 100°. I dismissed my patients and lay on the sofa for a while. An hour or so later Dr. Leavell came in, and I told him I would go home and asked him to call and bring Dr. Cartledge that afternoon.

At home I lay on the sofa and was able to reread Middlemarch with pleasure. I took nothing to eat, as I thought perhaps an operation would be advisable that afternoon. Drs. Cartledge and Leavell called about 4:30. My temperature then was 102°, my pulse I think something over 100, and the pain in the abdomen becoming more constant and more acute, but still far from being severe. The tenderness on pressure was perceptible, but not intense.

Dr. Cartledge stated that operation might be postponed till the next morning, and that if the symptoms were then better I would perhaps recover from this attack without operation, but would be very liable to a recurrence; he thought immediate operation the safest course. Dr. Leavell was also of this opinion.

I willingly followed their advice. I

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asked the doctors how long I would be at the infirmary. Dr. Cartledge replied that I would be there two weeks and should rest two weeks longer, and that I would not feel like a spring chicken then. Except for the last few words the prognosis was exact.

I did stay at the infirmary two weeks and I did rest two weeks longer, but at the end of that time I did feel like a spring chicken, or at least much more like one than I had done for a long time.

We drove to the Norton Infirmary and in about an hour I was on the operating table. This was just 51 hours after the first attack of pain.

Meantime a specimen of my urine was submitted to Dr. Cartledge and found normal. In addition to Drs. Cartledge and Bullitt, and Dr. Ireland, who gave the anesthetic, Drs. Leavell and Horace Grant were present at my request.

It was my first experience in taking an anesthetic and I observed the effects with interest. Chloroform was first used and later, I believe, ether.

The chloroform was in no way unpleasant to me. I felt a gradual drowsiness come over me, and then a loud roaring in the ears. I remarked on this to Dr. Ireland, and he said, "Yes, patients often compare it to the noise of a railway train crossing a bridge." The comparison was exact, but I was too far gone to do more than nod my head in reply as I fell asleep. When I became conscious it was after 10 o'clock. (I had been given a hypodermic of morphia under the anesthetic.)

There was great pain in my abdomen and a constant tendency to cough, which made the wound in my side feel like a sword was being thrust into me every minute or two; later in the night the pain in the small of my back became intense, and was only a little relieved by the nurse turning me and pushing a pillow under my back; coming on so soon after the operation, and disappearing a day or two later, while I still lay on my back, it is very difficult for me to think that this horrible aching is due to the decubitus; to these harassments there was added a few hours later the most insatiable thirst. Nothing I have ever tasted before or since is to be compared to the teaspoonful of hot water given me every now and then at this time; towards morning I became a little nauseated, and twice vomited what seemed to be a small quantity of bile. There is nothing too bad to be said of this first night. I had no sleep, except the two or three hours following the operation.

About 9 o'clock the doctors came. They ordered heroin, I think a twelfth of a grain, hypodermatically. It acted like a charm. I slept peacefully several hours. When I awoke there was no nausea, and though the thirst was still intense, the allowance of hot water was a little more generous.

The aching in the small of my back was still severe, and the pain in my side on any effort to move was only partially relieved by the assiduous attention of the nurse, who would put me in a more comfortable position and propped me with pillows. After the first twenty-four hours all these distresses began to subside.

I was given another hypodermic (heroin, I believe) at night and had a fairly good night's rest. The heroin produced a delightful sense of general well being, and this was followed by refreshing sleep without subsequent nausea. On two occasions I had previously been given a hypodermic of morphia. It eased the pain from an abscess at the root of my tooth and made me sleep, but next morning I thought I would "throw up my immortal soul," as Mark Twain said he did after taking all the remedies that were suggested to him for a cold.

Heroin had no such bad effects. My recovery from this time on seemed to me rapid and uneventful. The only medicine, I think, was an occasional dose of bromidia and a hypodermic of heroin at night.

The constrained position made it hard

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for me to sleep. The drainage tube was removed in a few days and the stitches at the end of a week; neither procedure caused any pain or inconvenience.

My diet was gradually increased, beginning with buttermilk, and in the course of five or six days reaching what in hospital language is termed a full tray. I enjoyed my meals and acquired for buttermilk a liking which so far has remained.

On the third day after the operation I felt almost normal and was anxious for my cigar and the morning paper. A day or two later these luxuries were permitted me.

Though I felt quite well enough to be up in seven or eight days, I was not allowed to leave the bed until the twelfth day; I spent that morning in the roller-chair, and on the fourteenth day after the operation I returned home. I put on an elastic abdominal supporter, which I still wear.

Three days later I went to Virginia Hot Springs, where I stayed about a week. Three weeks to the day after the operation I enjoyed a mountain walk of over four miles. I weighed on this day and found I had gained several pounds over the weight previous to my attack—weighing now 163 pounds.

After leaving the Hot Springs I spent a few days at my old home, Charlottesville. One of my friends advised me to be operated on every month—as I looked better than ever before.

My health has since been excellent. So far I have had no flatulence after eating and no intestinal discomfort; it is probably too soon, however, to say with certainty that the operation has removed these occasional annoyances.

I returned to my office four weeks to the day, and almost to the hour, after I had left it.

I cannot close this paper without expressing my grateful appreciation of the patient and thoughtful nursing which did so much to make pleasant my hours of illness, and of the wise and skillful surgery to which I owe my life.

MANAGEMENT OF THE THIRD STAGE OF LABOR.

BY CASSIUS DUDLEY MANSFIELD, M.D.,

Secretary Powell County Medical Society; Chairman Powell County Board of Health; ex-Second Assistant Physician Eastern Kentucky Asylum for the Insane, Lexington, Ky.; ex-Second Vice President Kentucky State Medical Society; ex-Secretary Kentucky Valley Medical Association, Etc.

STANTON, KY.

In ordinary cases of labor a correct management of the third stage is the most important of all the duties of the physician. Only a few years ago the method taught was to wait for a certain interval after delivery for contraction of the uterus, and then to pass the fingers into the vagina and trace up the cord, feeling for its insertion into the placenta. If the insertion could be felt the cord was to be wound round the fingers of one hand so as to give a purchase for pulling, while the fingers of the other hand in the vagina were placed on the cord so as to direct the traction at first backward in the axis of the pelvic inlet. In practice it has not been uncommon to remove or attempt to remove the placenta by traction on the funis even when the insertion of the latter could not be felt, the placenta being still wholly in the uterus. The objection to this method is that any traction whatever on the funis pulls away the center of the placenta from the uterine wall, and so creates a vacuum which must be filled up either by blood poured out through displacement of some of the thrombi, or less frequently by entrance of air from outside; moreover, by drawing the placenta down like an inverted umbrella it interferes with the natural mechanism of its expulsion and renders its bulk greater for passing through the cervix and vagina.

Expression of the Placenta.—The correct mode of aiding the delivery of the placenta when aid is required is that of external pressure. During the birth of the body of the child the physician is to follow down with his hand the contracting uterus, and by pressure

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and, if necessary, gentle friction stimulate it to maintain its retraction. After the child is born it is not desirable by forcible pressure to attempt to completely expel the placenta with the same pain which expels the child, or immediately afterward. For if the uterus be completely emptied before thrombi have had time to form in the vessels it is more apt to relax again quickly, not being stimulated by the presence of the placenta within, and so to allow hemorrhage to take place. At this stage I usually prescribe one teaspoonful of the fluid extract of ergot in one-third of a glass of water. Provided that there is no hemorrhage, it is better to wait from twenty to thirty minutes after the birth of the child to allow the thrombi to form. Meanwhile the physician should keep his hand on the uterus and grasp it firmly, and relax his hold upon the uterus and then grasp it again and squeeze it firmly, and do this way every one or two minutes, or oftener, so as to cause the uterus to contract and to stimulate it so that it will not relax. After a sufficient lapse of time gentle uterine contractions will probably be beginning to recur. These are to be stimulated by a more active pressure, combined with friction over the fundus. As soon as an active contraction is called forth by these means, so that the fundus becomes quite hard under the hand, the fundus is grasped with the palm of the hand and fingers and circular compression made upon the body of the uterus at the same time that it is pressed downward and backward into the pelvic floor.

The expulsion of the placenta out of the uterus into the vagina is known by the diminution in the size of the uterine body. By continuing the pressure downward in the axis of the pelvis the physician may then generally complete the expression of the placenta out of the vagina and into the bed. At this stage, or when the placenta has been spontaneously expelled up to this point, if he can feel the lower margin of the placenta in the vagina there is no harm in seizing that with the finger and thumb and aiding the pressure from above during the uterine contraction with gentle traction upon it. If the expression of the placenta does not succeed with the first pain it should be repeated with successive pains without using undue force until the placenta is gradually detached. As the placenta passes through the vulva it should be twisted upon itself so as to twist up the membranes into a kind of cord, which is to be withdrawn very gradually so as to avoid tearing. If it is felt to begin tearing it should be seized by the fingers in the vagina at a higher point and so extracted.

In general the expression of the placenta can be carried out with the patient still upon her back in which she has been delivered, either left or right hand being used to compress the fundus. If the uterus is large and relaxed, it is not desirable to press it too strongly downward, but to grasp it firmly with the hand which you have over the fundus and thus stimulate the muscles to contract. The attending physician must carefully examine the placenta after its removal to see that its uterine surface is complete and that the double layer of separable membranes, amnion and chorion, is present. If any portion of the substance of placenta or membranes appears to be absent it must be sought for within the uterus. In any case the finger should be introduced into the vagina while the uterus is compressed with the other hand, to ascertain whether within the cervix any clots can be felt, the removal of which is likely to avert afterpains, and whether the cervix itself has undergone any laceration, and if it has it should be treated at once along clean surgical lines.

Examination of the Perineum.—After the delivery of the placenta a careful examination should be made as to whether there is any laceration of perineum, so that any rent may be immediately sewn up. If any doubt re-

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mains after digital examination the perineum must be exposed and thoroughly examined, and if there is a rent close it up at once with strong sutures (either silk or catgut sutures being used).

The Use of the Binder.—The object of the binder is not to serve as a prophylactic against hemorrhage, for which purpose it is worse than useless, but simply to supply that support to the abdominal viscera which is taken away by the sudden expulsion of the womb contents.

The binder should never be applied until at least one hour has elapsed after the birth of the child and a sufficient continuous contraction of the uterus has been secured. Up to that time the attending physician should keep his hand on the uterus, observing its condition, kneading it if it becomes large and soft or hemorrhage occurs; but remembering that a certain alternation of hardness and softness is the physiological law.

If there is any excess of sanguineous discharge, or if the contraction of the uterus is unsatisfactory, he must continue this observation for a longer time until he is certain that there is no longer risk of hemorrhage. After the application of the binder, and you are certain there is no risk to be taken from hemorrhage, then the mother should be left perfectly quiet, to rest, and, if possible, to sleep.

THE SURGICAL TREATMENT OF ABDOMINAL DISEASES.*

BY LOUIS FRANK, M.D.,

Professor of Abdominal Surgery and Gynecology in Kentucky University, Medical Department; Surgeon to the City Hospital; Member of Surgical Staff of John N. Norton Memorial Infirmary,

LOUISVILLE, KY.

It must be conceded that the most rapid advances in surgery in late years has been in the treatment of diseases of the abdominal organs. This is due in part to the perfection of our surgical technique, and our practically prfecet asepsis, and in a great part to our ability to diagnose more accurately the lesions and changes in these hidden organs. Our diagnostic ability has been much enhanced by pathological studies in the laboratory and on the living subject in the operating room.

In this short paper I shall touch upon only a few diseases which, in my humble opinion, can be best dealt with from the surgical standpoint. Let us take, for instance, that much discussed organ, the appendix vermiformis. Strange though it may seem, there are men in the profession to-day who do not believe in operating upon *any* case of appendicitis, maintaining that all will recover under medical treatment, or at least without surgical intervention. I am myself convinced that only rarely will a case of appendicitis die in the primary attack of the disease, provided it is properly treated, but just here is the rub. Our patients and their families will not aid us, nor will they comply with the rigid rules which must be laid down and followed out in managing the case properly. How many of your patients can you hold if you refuse to give relief by morphine, or some anodyne? How many of them are willing to be fed per rectum for a week, and to forego even drinking of water or some most bland nourishment taken by mouth? Very, very few. I am firmly convinced that no case of primary appendicitis ever completely recovers unless the organ is removed. Examinations made in numbers of cases have convinced me of this. The first attack subsides, but behind is left either a scar, a constriction which causes retention of fecal contents distal to it and a subsequent enterolith, or a small ulcer or an infected wall ready to again give rise to trouble upon the slightest provocation. Practically every case of perforative appendicitis, every case of appendicitis with enterolith, and these are quite frequent, have undergone one or often more previous attacks, each one

* Read by invitation before the Central Kentucky Medical Association.

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increasing the dangers to the patient either with and most certainly without operation. There can be in the minds of those who honestly and thoroughly investigate this subject but one opinion, and that is that the disease demands the presence of the surgeon even if only in the role of consultant from the beginning, and further, that early and primary operation is by far the best plan of treatment, yielding the best results with least danger, quicker recovery, and saving more lives than any other method we have.

Should, perchance, as a result of surroundings or inability to procure a competent surgeon, it be impossible to operate, then absolute quiet in bed, withdrawal of all and every kind of food or drink by mouth with rectal feeding, and no purgation or opium, will be most satisfactory. Early diagnosis and early operation are, however, the slogan. The diagnosis is as a rule easy, and rarely in my experience has a mistake been encountered in overlooking this lesion or calling it some other disease. On the other hand, I have not infrequently seen cases diagnosed as appendicular disease in which the trouble was in some other organ. This is notably true where women have been affected, here inflammatory disease about the appendages, in one case an ovarian cyst, in another an ectopic gestation being the real trouble. As a rule these cases were operative, so that the gentlemen with whom they were seen made no mistake as to treatment, the indications being clearly surgical, and I was able to sustain them in their advice to their patients. In one case seen the physician in attendance had construed an attack due to gall stones as appendicitis. Operation for the former was followed by complete relief, no disease of the appendix being found. Movable kidney in woman and renal calculus in the male have also been the occasion of a call for operation for appendicitis.

In women, then, especially, we may mistake other diseases for appendicitis, and I am sure this is done far more frequently than the reverse, though the other diseases of the right abdominal region must always be considered if the patient is a female. In the male peritonitis means practically always appendicitis. The exceptions are infrequent, no matter where the pain may be located or referred. I was enabled recently to see this very forcibly demonstrated, and, I am sure, to impress it upon the mind of one of my medical friends.

I try to instill this into the minds of my students and believe that the time we spend in the study of this disease in our course is well spent, and we are fully repaid if we can get these few points fixed firmly in their minds:

1. That appendicitis is a dangerous disease.

2. That the symptoms upon which to base a diagnosis are pain in the belly, greatest tenderness over the base of the appendix, which is the McBurney point, no matter where the pain may be referred or located, and rigidity of muscles at this point.

3. Do not wait for tumor, as often no tumor ever forms, and oftener the patients are beyond surgical aid by the time tumor is present.

4. Do not be guided, or rather misguided, by pulse or temperature.

5. Peritonitis in the male means nearly always appendicitis.

6. The disease is surgical from the beginning.

7. The first twenty-four hours is the time for operation.

8. If operation is refused or impossible, starve the patient through the attack and operate in the interval before a recurrence.

9. Never–never–never give opium in any form.

Gall Bladder Disease.—If there is one surgical procedure which yields results which are entirely satisfactory to the patient and to the operator, it is that done for the relief of gall stones. In speaking of gall bladder disease I shall not take up but one, cholelithiasis, and of the various locations of

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stone we will exclude all but those in the bladder. The diagnosis once made to the satisfaction of the attendant, there is, I contend, no treatment which relieves completely, quickly, and that, with practically no danger, and a loss from business and accustomed duties of not more than three weeks, like cholecystotomy and drainage. It is simple, quick, and if all stones are removed, one of the most gratifying operations in the entire domain of surgery. Medical treatment may relieve symptoms temporarily, but never permanently. I wish here to express my opinion most emphatically that neither olive oil nor any other medicament ever cured a case of gall stones or caused their passage. The passage of stones which have come away after possibly months of treatment, of pain and of suffering, is only coincidental, and would have occurred without any medicine. The passage of these stones is not effected by a dilatation of the ducts, but by ulceration or the formation of a fistula between the bladder and intestine. There is further, even should a stone be passed, no assurance that the bladder is free of concretions.

A bladder stone means an infected bladder. The treatment of necessity must be by drainage. This can only be accomplished by opening the viscus by a surgical operation.

An infected organ is a menace not alone to health, but to life. The sequellæ, such as perforation and peritonitis, hemorrhage, obstruction and cholemia or intestinal obstruction, or the frequent occurrence of cancer which follows impaction in the ducts, cannot and must not be gainsaid nor overlooked. They are not fanciful but real dangers.

In this disease we may, however, experience some trouble in diagnosis. Many cases are doubtless now and will for some years be treated as cases of dyspepsia and indigestion. If you will investigate your cases of digestive disturbances carefully and thoroughly you will find numerous cases of gall bladder disease. Do not wait for jaundice to appear, for this is a symptom in only a small percentage of cases and occurs only as a result of inflammatory or calculus obstruction of the common or hepatic duct. Pain and especially tenderness on pressure at Robson's point, i. e., midway between the ninth costal cartilage and umbilicus, is the most valuable sign. In conjunction with a history of long-continued dyspepsia or indigestion, especially shortly after eating, paroxysmal, radiating into back and right shoulder, with relief following vomiting, is almost pathognomonic. Oftentimes there is just the slightest tingeing of the sclera with bile.

The one reason why we do not see more cases of gall stones is simply because we do not look carefully for them, but are satisfied with treating these patients from year to year by dieting and digestants and those remedies used for a supposed functional indigestion. One point I would also mention and have you remember is that gall bladder colic may exist quite severe and no stone be present. Operation will reveal a distended bladder filled with bile or bile and mucus, no stone, no apparent obstruction, but drainage will relieve completely.

One case seen was the mother of a prominent newspaper man, who had suffered for years with indigestion and repeated attacks of paroxysmal pain in the gall bladder region. There was slight jaundice with vomiting during the acute attacks. At operation the bladder was found distended and enlarged until it reached below the umbilicus, a fistula was established, and, after a month's drainage, permitted to close. The result has been a cure of all symptoms. No dyspepsia nor pain for over a year, and she is, I think, cured.

Renal Calculus, etc.—In kidney stones we have a condition which in its early stages may be entirely amenable to medical treatment. Renal stones may, however, rapidly increase in size, often they are large when symptoms

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first manifest themselves, and under such circumstances nothing short of removal by the knife can do any good. We should be alert when we hear complaints as to pain in the loin or in the abdomen for this condition. I have known patients to die from the effects of renal stone and their presence never suspected. They are insidious in formation. The symptoms are often obscure, not classical, and therefore they are often overlooked. I attach greatest importance to blood in the urine, oft times only in microscopic quantities, pain on pressure of the kidney between the hand in the loin and the hand superimposed on the abdomen over the organ, and tenderness on pressure at a point midway between the axillary line and the umbilicus, and on a plane with the latter. The X-ray in the hands of some expert operators has yielded brilliant results, and, if diagnosis is uncertain, is worthy of a trial.

Should one be assured of the presence of a concretion nephrotomy is the operation of choice, and unless the kidney was hopelessly destroyed a nephrectomy should never be done. The operation is rapidly done and comparatively easy of performance through Morris' oblique incision, which I personally prefer, believing the organ can be more easily lifted out of the cavity for examination and incising, and more room given for manipulation than through the perpendicular incision down the back. The hemorrhage, while alarming if not properly controlled, is ordinarily of no moment. The poles of the kidney should be avoided by the incision, which goes through the organ to its pelvis, and should be made a bit posterior to its middle line and longitudinally. After the pelvis is opened the calices may be easily palpated and any stones removed. The exploratory incision into the kidney and digital palpation is far more certain and preferable to needling indiscriminately in all directions in the search for the stone, and the latter should not be done either in place of the incision or as the preliminary thereto. If there is no pus in the kidney it may be closed with catgut sutures passed deep into the parenchyma without drainage of the kidney itself, though for fear of leakage it is a good idea to drain the renal fossa for twenty-four or forty-eight hours.

Movable Kidney.—About 15 % or 20 % of all women I examine present movable kidneys, in many of these no symptoms being, however, referable to the mobility. Since observing these patients closely my opinion has undergone some change in regard to the treatment of these cases. Formerly such patients in whom this condition caused symptoms were treated by properly constructed corsets, and some were benefitted, others still suffer, a few are comfortable with the corset, but possibly only one cured. Two of these cases, bad ones, I have recently advised to be operated on, for since noting and comparing my results after operation with the non-operated, I am forced to conclude that it is the thing to do. And it cures by an operation which in itself is free from danger and puts the patient in bed for about three weeks. This condition frequently follows labor with perineal tears.

A case operated on four months ago has been completely relieved. She had angulation of the ureter, a large kidney, and suffered much from urethral obstruction. Dangers present were those of cystic kidney, due to distention from pressure from retained urine. Pain agonizing. In proper cases nephropexy is certainly the one plan to be advised and even urged.

Suppression and Bright's Disease as treated by decapsulation I have had no opportunity to test. In the former, however, it is a life saver in certain cases, and Edebohls has reported many brilliant and almost miraculous results following the operation in the latter.

Of the many other abdominal diseases, such as those of the female generative organs and the pancreas, we will not have the time to touch even in

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as hurried and brief manner as the foregoing, but I cannot conclude this subject without a few remarks in regard to typhoid and traumatic perforation of the intestines, bowel obstruction and cancer of the stomach.

In these latter conditions, as in most other conditions intra-abdominal, the important point is to make an early diagnosis and to follow this up by an early and complete operation.

Typhoid and traumatic perforation are to be treated in all instances by immediate surgical intervention. In traumatic perforation due for instance to a gunshot or stab wound it should not be so much a question of waiting until the perforation is demonstrated absolutely by subsequent symptoms, but to take it for granted that these wounds are all of such character and that opening the abdomen is demanded. Only by following this rule can the greatest good be done and best results achieved. These injuries in civil life are of such a nature that they practically never recover without laparotomy, even though the intestine is not perforated.

The conditions surrounding the patients are such that there is no danger at all from an exploration *per se*, and we should not therefore base the treatment of wounds of this character upon the results achieved by non-surgical treatment in those wounded in the abdomen on the battlefield. In the latter the missile is of entirely different character, the surroundings and conditions under which the wounds are received are not conducive of the best operative results, while on the other hand the velocity and smallness of the projectile, in conjunction with the fact that the intestines are usually empty or nearly so, are great factors in getting the many recoveries following non-surgical treatment.

I believe the time has now come when we should be prepared to treat perforations, the result of typhoid ulceration, by immediate celiotomy and closure. The brilliant results which have been achieved in this class of cases, which we look upon ordinarily as hopeless and in which recovery is almost miraculous, treated along the old lines, should convince us not only that this is the right and proper thing to do, but should also cause us to be constantly on guard and watchful for the earliest indications of this complication. I place more reliance upon sudden and sharp pain in the abdomen, especially the right lower quadrant, followed by symptoms of shock, though at times in the very slightest degree and rapidly succeeded by pain more or less localized, with rigidity of the abdominal muscles, as most valuable signs of this accident. Distension may occur very rapidly, and if liver dullness disappears and tympany takes it place, that is, if free gas in the abdomen is demonstrable, the diagnosis is almost certain. To wait until distention appears, however, or until symptoms of general peritonitis develop, will be oftimes postponing interference too late. Certainly with general peritonitis, suppurative as this peritonitis usually is, there is not much chance of success in a patient who has been sick for two or three weeks with typhoid fever. The operation when done should be done then as early as possible after the diagnosis is made, should be performed rapidly, and, if a general anesthetic cannot be borne, be done under local anesthesia, wasting no time in useless or unnecessary pottering, and finally the abdomen should always be drained and thoroughly so.

Bowel Obstruction.—The only point I desire to mention in the treatment of intestinal obstruction, whether due to band, volvulus or hernia, is that the time has come to cease manipulative efforts in the hope of relieving the condition. In this day of modern surgery to keep a man under an anesthetic for an hour or more attempting to reduce by taxis a strangulated hernia, and certainly to do this without chloroform, or to fool away time trying to relieve an obstruction by rectal injections, by distention with air or posture, is in my

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opinion criminal. The reason so many of these cases die may be summed up in two words—meddlesomeness and delay. Every case of intestinal obstruction, unless due to cancer or an inoperable tumor or an impacted foreign body, should recover from an immediate operation—that is, just as soon as a diagnosis is made, provided the diagnosis is made early in the case; and I may say, in passing, that there should be no difficulty in the diagnosis.

Cancer of the Stomach.—The results of Robson and Mayo in the magnificent work which they have been doing, and the experience of all surgeons in the treatment of malignant disease, is such that we feel we can safely recommend early surgical treatment in these cases; it is the only hope for cure. Careful attention must be given in the future to the symptomatology of gastric diseases. All symptoms referable to the stomach must be carefully investigated and we must perfect ourselves in our diagnostic methods and ability in reference to this organ. I think I may safely say that all doubtful cases should be explored, and if conditions are found amenable to radical surgery they should be relieved. Many times, though, radical means cannot be used, palliative measures may be carried out much to the relief and comfort of the patient and the prolongation of life.

229 West Chestnut street.

EMPIRICISM AND MEDICAL COMMERCIALISM*.

BY D. L. FIELD, M.D.,
JEFFERSONVILLE, IND.

If we could believe the claims as to composition, purity, pharmaceutical perfection and medical potency of the vast and increasing number of proprietary preparations, we would be saved a great deal of wear on our gray matter in an effort to prescribe eligible and compatible compounds of the materia medica!

That there are many meritorious preparations, eminating from reputable and long established manufacturing chemists and pharmacists, we all admit, and their reliability and efficiency are beyond question, but the medical field is overgrown with mushroom grafts, with loud and extravagant claims of excellence not warranted by the composition or combination of ingredients. The most gifted and voluble representatives are employed by the pretentious manufacturers, and the helpless M. D. is amazed and humiliated as it dawns upon him under the magic spell of the "sampler's" spiel, that he groped along so many years in ignorance of the infallible compound thus brought to his attention. The employment of copyright preparations, unless the name of the compound is concealed from the patient, leads to the suspicion on his part, that a patent medicine is being prescribed, and the habit of directing a patient to procure an original bottle of this, that and the other trade-mark compound, reduces the physician, in the estimation of the laity, to the level of the mountebank prescriber of patent nostrums. There are some preparations and chemicals that we all prescribe, the patent being on the process and quality of the chemical, such as Squibb's chloroform, Norwood's tinct., etc., and, in prescribing them, a physician is not unethical, and, in general, he gets the best results as a consequence. The fine chemicals of these times, so palatable and nice looking compared to the old-fashioned, crude compounds, should merit our gratitude to the skillful and scientific chemist and pharmacist.

As to empiricism, we are all more or less empirics when we treat our patients experimentally, or, in other words, with proprietary medicines in which we have only a blind faith, and that faith only based on representations made by the manufacturer or some paid medical enthusiast.

While we of necessity treat more symptoms or expressions of disease without a diagnosis, and are thereby

*Read before the Clark County (Ind.) Medical Society, May 5, 1908.

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empirical even when adhering to time-tried medicamentum armamentarum, yet such a course is all right, but it is not all right to subject our sick to doubtful trade-mark compounds. Even with a good understanding of the agents of the materia medica, we nevertheless treat more symptoms of disease, and await a clearing-up of the case before we intelligently combat it.

Every intelligent and experienced physician of many years' practice knows there was a great deal more "empiricism" in early times than there is to-day, because two or three decades ago there was no knowledge regarding the cause and nature of diseases we now know to be from causes not then even suspected. As to the employment of proprietary preparations again, the physician who resorts very much to such so-called remedies fosters, perhaps unwittingly, an abuse that may result in the suspicion of ignorance of his art, on the part of his patient, not to speak of the depleting effect of the patient's exchequer. We should call a halt on the infinite multiplication of new combinations and keep as close as possible to time-tried and therapeutically-tested agents of the pharmacopœia.

Our medical journals teem with advertisements of new-fangled compounds, which are claimed to be specifics, and the general run of medical journals are little more than the daily paper advertisers of quack nostrums. There are preparations that some have been prescribing which are advertised in the papers as "at all druggists," etc. We need a reform! The evil is growing worse and worse every year. While many remedies are honestly and scientifically prepared, the majority are worthless, and owe their prominence to advertising. The encroachments of these numberless panaceas of the province of the practitioner are great, and we should be careful how we put our trust in the testimonial of some medical enthusiast, whose flattering reports on a limited trial is utterly unreliable. Physicians are sometimes remunerated with handsome fees for writing case reports in which certain trade-mark remedies were employed.

That there is a strong tendency upon the part of physicians to overestimate the value of new remedies is well known. These remedies are new chemicals, and they are coming out more rapidly than the busy practitioner can keep track of. Of course, it will not do to condemn progress or discovery in the science of medicine, or the art of the pharmacist, as we all know there are many new agents that are destined to occupy an important place in materia medica; yet grasping at every new remedy is reprehensible, as it is necessarily experimental, and therefore empirical practice.

The practice of advertising by circulars and postals smacks very strongly of the dodger practices of the disreputable patent nostrum vendor, and the time will come when the self-respecting, self-reliant physician will be compelled to fall back on his own resources, and and resort to the medicinal agents of the dispensatory, in order to successfully combat disease; at all events he will know what he is doing.

A few years ago, the American Medical Association adopted the following resolution:

"*Resolved*, That the spirit of the code of ethics forbids a physician from prescribing a remedy controlled by a patent, copyright, or trade-mark. This shall not apply to a process of manufacture or to machinery, provided said patent does not exclude legitimate competition; and shall also except the use of a trade-mark to designate a brand of manufacture; provided, further, that the article so marked be accompanied by a working formula, duly sworn to; and also by a technical name under which any one can compete in the manufacture of the same."

The New York State Society adopted the following:

"WHEREAS, The indorsement of proprietary pharmaceutical preparations by physicians is a growing evil; therefore,

"*Resolved*, That it is reprehensible for physicians to give certificates attesting the efficacy of medical or surgical appliances, or of proprietary or copyrighted drugs, medicines, wines, and mineral waters," etc.

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There is a legion of preparations for indigestion; a legion for the liver, containing glycogen; another for the duodenum and pancreas, containing "duoderin" and "pancreatin;" another for the small intestines containing "succus entericus," so that at this rate, every process of the alimentary tract can be carried on artificially, and perhaps better than naturally!

Another evil that should be mentioned in connection with such a multiplication of new preparations, which are experimentally prescribed, is the hardship in the matter of dead stock piled up on the druggist's shelves. A doctor is sampled, prescribes a few ounces of some new fad; the druggist can buy no less than a pound, and the doctor, not realizing his expectations from the drug, ceases to prescribe any more, and the outlay to accommodate the doctor is lost. Such a practice is simply a great injustice to the apothecary, and we should do all we can to protect his business from loss, so far as we are concerned.

In the new pharmacopœia one can find all the elixirs, extracts, alkaloids, unguents, etc., he will ever need to fight disease successfully, and if we physicians don't call a halt on this trade-mark business we will run the risk of being crushed between the millstones of medical empiricism on the one hand, and the manufacturers' usurpation on the other.

HARSHNESS OF THE HAIRS.

BY A. K. BOND, M.D.,

OF BALTIMORE.

Hypertrichosis is well known, being discussed at length in all text-books on diseases of the skin. There is, however, a condition of the short hairs of the human body, somewhat akin to hypertrichosis, yet not necessarily associated with enlargement of the hair, which constitutes a definite clinical, if not anatomical, disorder. It is characterized by excessive rigidity of the hair, and occurs locally in various regions.

The general observation that the hair of the head and beard varies greatly in luster, softness and flexibility with the patient's systemic health is familiar to the profession, and to many of the laity. The weedy, dilapidated appearance of certain invalids is largely due to this; and many persons have learned to look upon a rebelliousness of the hair to toilet manipulations as warning of approaching ill health.

The condition, which for want of a better name, I may call the Harshness of the Hairs is doubtless also dependent on perversion of the nutrition, but is not, probably, an indication of general ill health, such as would call for general therapeutic care. It may perhaps be due to a local deficiency of the oil with which the hair is lubricated.

Clinically, the condition is observed in many locations, and at various periods of life, although the liability to it probably increases with age, and is especially marked after the turn of life in those individuals whose skin tends to become rough and "lichened" as old age approaches.

IN THE EYES.

There is a form of conjunctival irritation which has this origin. The patient finds that while reading his eyes feel gritty, and he rubs them vigorously with the result that they become more and more irritated. Under alkaline collyria and rest of the eyes the condition gradually passes away, the offending hairs being softened by the wash used, and by the recovery of eye-tone upon relief of eye fatigue.

In some of these cases the gritty feeling is confined to the canthus. A magnifying glass will explain the irritation by revealing several tiny hairs whose removal will at once restore the eye to comfort and usefulness. These little hairs are always growing in the canthus inside of the skin line where we would not suspect their presence. They have for some reason become harsh—though

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not overgrown—and have irritated the delicate mucous membrane in which they are located. If removed, the new hairs will, probably, be soft and unirritating.

IN THE NOSTRILS.

There are many persons who at times (and this condition appears to occur in little epidemics in the community) suffer from crops of boils in the nostrils. These boils may be only of a split-pea size, healing themselves with but slight discomfort, or the infection may run deeper, and a beautiful counterfeit of the "rum nose," very humiliating to the teetotaler, and very painful, no matter what views of alcohol are taken, may slowly pass on to the formation of an abscess involving all the lower part of the nose. It is a process very much dreaded by every one who has once experienced it, and measures for its prevention when it threatens are gladly welcomed.

The disorder seems in many cases to be dependent upon this same Harshness of the Hairs, of which we are now speaking. The stiff hairs which stand guard at the entrance of the nostrils and for some distance within their portal have for some reason become harsh, and by their presence and movements when touched irritate the sensitive mucous membrane on which they are rooted. If the patient, on the first warning that something is wrong with the vestibule of a nostril will take a forceps and carefully search for and extract *every* hair in the irritative region, the nostril will quickly return to the normal. The tiny pustules and the local inflammation will remain; but irritation from the long, harsh hair-lever being removed the parts will quickly heal which would otherwise have given much trouble in spite of salves and washes—these naturally stiff hairs being very difficult to soften. The writer has treated many such cases in this way, always with the same beneficial result. Of course deep abscesses beyond the depth of the hair are not to be cured by such epilation.

ON THE EARS.

A similar condition is observed a times on the lobe of the ear. Th patient will feel some discomfort at point upon the lobe, and, touching i with the finger, will find it rough. Frequent rubbing and scratching of th rough place will develop a tiny sore o an eczema which runs a chronic loca course. Examination even with th naked eye will reveal a large, harsh hair or several of moderate size. These being removed by epilation, the skin will feel smooth again, and the place will quickly heal.

ON THE NOSE AND FACE.

In these locations the disorder ha possibly a much graver importance than in that just mentioned. The nose i planted sparsely with little hairs in visible to the naked eye. These tiny hairs undergo at times a process o harshening similar to that already described in other regions. Being so small, their participation is unsuspected in certain irritative lesions of the skin. A minute area of the skin will, for instance, become rough. As the nose is an object of considerable attention, conscious and unconscious, the rough place is rubbed into a tiny sore. In spite of salves it still continues rough to palpation by the finger-palm, which is exquisitely sensitive to any unevenness of surface. The more it is rubbed and anointed the worse it gets, until finally a chronic inflammation on a small scale is set up, with attendant thickening and pigmentation of the skin.

On examination with a magnifying glass in a good slanting light there will be found a number of patulous, unhealthy looking hair follicles, some inflamed, some capped with adherent crusts; and from these follicles or their edges will be seen projecting tiny hairs. If these be carefully pulled out (the forceps must be one specially made for epilation, which does not break the tiny hair shafts) the part becomes smooth to the touch, the follicles grad

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ually lose their patulous or inflamed and scabbing appearance, and the patient forgets the sore place.

The epilation must, however, be repeated about twice a month for a considerable period, as the parts are still very sensitive to the swaying of the hair craft. More frequent epilation by the search deeply after too short hairs and the tearing off of the tiny crusts only perpetuates the disorder.

This condition may, of course, occur on any part of the face. Its importance is due to the fact that it is a possible source of skin cancer. It is well known that skin cancer is largely due to chronic irritation of the skin (causing an abnormal growth of its cell elements or rendering it liable to invasion of infective agents) often by the finger of the patient. A wart as it grows harder with age is more and more handled and picked at, until a cancer appears. It is possible that in the absence of such gross excrescences the tiny hair, grown harsh, may be the offending object, producing by its presence and passive movements a minor irritation, and through the continued handling and scratching which it occasions the grosser irritation upon which the cancer forms itself. This theory accords with the fact that skin cancer becomes more frequent in the decline of life when the hairs also tend to harshness; also with the fact that the satisfactory destruction of a skin cancer must involve the skin to a depth below the hair follicle.

As far as observed by the writer the above conditions have not been associated with any definite disease of the hair, and the irritation of the follicle and the adjacent skin disappeared quickly when the harsh hair was removed.

Dr. Wm. W. Keen, in an address before the Medical Department of Columbia University, gave as the Essential Qualities of Success in Medicine: 1. A good moral character. 2. Good manners. 3. Perseverance. 4. Studiousness.

PERTUSSIS AS AN ETIOLOGICAL FACTOR IN UTERINE DISPLACEMENTS.

WALTER B. JENNINGS, PH.B., M.D.,
Member of American Medical Association, New York State Association, New York County Association; Attending Physician St. Mary's Free Hospital for Children (O. D. P.).

NEW YORK, N. Y.

In considering the etiology of any pathological condition there are always two factors that deserve consideration, viz., predisposing and exciting causes. Race, sex, age and occupation belong to the first class, while any definite cause, such as traumatism, specific, micro-organs, or in certain cases, excessive muscular action, etc., belong to the second class.

I. LIGAMENTS OF UTERUS.—The normal uterus is held in position by the different ligaments within the pelvis supported externally by muscular and fibrous tissue which make up the peritoneum. As far as the subject in hand goes, we are concerned with the ligaments. There are eight ligaments of the uterus, two anterior, two posterior, two lateral, commonly called the broad ligaments, and the two round ligaments.

The experiments of Savage, as well as other anatomists, go to show that all these, more especially the two posterior or utero-socral ligaments prevent the downward displacement of the body of the uterus. Any relaxation of the uterine ligaments which act as a support, together with an increase in the size of the uterus, are common causes of displacements in multipara.

A congenital displacement is, of course, possible, in which case the utero-socral ligaments are shortened. Dr. Coe, of New York, believes that a downward pressure of the abdominal viscera during the development of the girl gradually causes a backward displacement of the uterus. Dudley, of Chicago, says a downward pressure during defecation, tight clothing and the obstetric bandage are causes of backward displacement, but that congenital displacements are rare. Ps a

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rose claims that retroversion may be caused by an arrest of development of the posterior uterine wall, the anterior outgrowing the posterior wall.

II. The Effect of the Paroxysm of Pertussis on the Body.—During the paroxysm of pertussis every muscle in the body is more or less contracted. As a result of the obstruction to respiration during the cough intense venous stasis takes place, which leads frequently to hemorrhage of the nose, mouth or gums, in the subcutaneous tissues, petechia of the skin, and in very rare cases cerebral hemorrhages.

Disturbances of the respiratory tract, gastro-intestinal tract and the nervous system also frequently occur. Vomiting and diarrhea may lead to malnutrition and even marasmus. Convulsions, coma, paralysis and aphasia may prove fatal. Hernia together with prolapsus ani occasionally are complications. Albuminuria is not infrequent. In fact, every organ in the body may become congested, and its functions temporarily or permanently affected.

III. Report of Case.—On May 27, 1901, Katherine L. gave the following history: Born in the United States; 30 years of age; single; art student and book designer by occupation.

Family History—Negative, both parents alive and well. No tuberculosis or rheumatism.

Past History—Up to ten years ago patient was perfectly well, and did not know what it was to be sick. First menstruation occurred at 14, was regular every four weeks, lasting three or four days. At times had a slight dysmenorrhea before flow. A slight leucorrhea. Ten years ago, while 20 years old, she had a severe attack of whooping-cough, often fainting after the paroxysm; since that time has been in poor health.

Present History—At the present time the patient complains of backache in region of the sacrum, frontal headache, anorexia, constipation, going one or two days without a movement, and burning sensation on passing her urine.

Physical Examination—General n trition poor; mucous membrane pa and anemic. Heart and lungs neg tive. Vaginal examination showed t patient to be a virgin, with circul hymen, glands of the urethra and vul vaginal glands normal. The vagin mucous membrane normal. The cerv elongated. A slight anteflexion of t uterus was present, and a marked thi degree backward displacement. All the uterine ligaments were relaxe Appendages normal.

Urine—Amber, cloudy, strong acid, 1031 specific gravity, trace albumen with acetic acid test, but a sent with nitric acid test. No suga The microscope showed urates, pho phates and epithelial cells; no casts.

Conclusions—In reviewing the ca in hand, we have a young woman athletic type, perfectly well up to years of age, who, after an attack pertussis, developed a third degree bac ward displacement of the uterus, a practically became a chronic invali If it were possible to draw any concl sions from a single case, they would as follows:

1. Pertussis may be an exciting cau of backward displacement of the ute us.

2. The effect of the paroxysm wou be to loosen the uterine ligaments, a muscular contraction of the abdomin muscle together with a downwa pressure of the diaphragm would te to force the uterus backward.

3. As a result of venous stasis all the organs in the body, there wou be a tendency to an increase in t weight of the uterus, and this wou tend to a backward displacement.

Alexander Graham Bell, in *Americ Medicine*, suggests the use of t X-rays from a tiny fragment of radiu sealed up in a fine glass tube and serted in the very heart of a deep-se ed cancer, thus acting directly up the diseased material.

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Society Proceedings.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, June 12, 1903, Dr. Ben Carlos Frazier in the Chair.

UNUNITED FRACTURE OF THE HUMERUS.

Dr. W. O. Roberts: This boy is 21 years of age. Last November he attempted to board a train and was dragged some distance with one arm under him on the end of the cross-ties. He sustained a compound fracture of the humerus and the wound became infected. It was put up two weeks after the accident in a long, right-angled splint extending to the hand, and a short splint on the outside of the arm. It was necessary to dress the wound daily for eight or nine weeks on account of the suppuration. There was no union at the end of that time. He came here in March and there was quite a separation between the fragments. I turned both ends out and bored a hole through each of them and fastened them together with a No. 3 chromicized gut and put on a plaster bandage and kept that on for eight or nine weeks, the dressing being changed two or three times. Still there is no union. He was not in bed any time after the operation. I would like to get the opinion of the members as to the case.

DISCUSSION.

Dr. Ap M. Vance: I believe that without operation the condition of the arm will remain as it is, and grow worse, and think there should be another attempt to bring about union. I think it would be wise to lap these bones and fasten them with metal or some other material. There is not very much chance of getting them together by end-to-end approximation. These are very difficult cases to handle, for this is the worst bone in the body to deal with. This is a young man, and the arm is of little service as it is, and something should be done. The great danger would be that of injury to the musculospiral nerve, but I believe the lapping should be done. The periosteum could be saved and utilized.

Dr. A. M. Cartledge: I agree with Dr. Vance. I have had one or two cases in the last few years which failed to unite. In one case we used a silver clasp with screws and that worked very well.

Dr. J. B. Bullitt: I feel a great interest in this case. The humerus seems to me the worst bone in the body for this kind of a fracture. The case referred to by Dr. Cartledge differed in that it had the nerve injured in the original injury, and the nerve was included in the callus. The bones were somewhat apart. It always seemed to me that the most interesting feature is the cause of the non-union, which is not always due to lack of fixation. In fact, too perfect fixation is sometimes responsible for it. In the case spoken of, we made two efforts to get union, both total failures. I made up my mind that the next time I would attempt to put in a silver plate with screws, leaving it in for a length of time, and if there was any irritation, make a secondary operation to remove the plate. I think clamps would be suitable in this class of cases, for reports of its use are very gratifying. I think it probable that local interference with the periosteum sets up irritation which favors the formation of bone tissue. I think the surgeon's duty in a case of this kind is to make further attempts to get a good union.

Dr. W. O. Roberts: I agree with those who have spoken that this is the worst bone to deal with in trying to get union after faulty union has occurred. It is also the one in which we are most likely to get a faulty union. I further agree that the only thing to be done is to attempt to get union again. I do not know of any special advantage of the metal sutures over the others, however.

ELEPHANTIASIS.

Dr. W. O. Roberts: This is to me quite an interesting case. Here is a

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man 49 years of age, whose mother and father lived to be 70 and 60 years old respectively. He has three brothers and one sister living, no member of the family being subject to any form of tumor. He had gonorrhea seventeen years ago, which he says got well in fifteen days without the use of injections. Four years ago he began to have trouble in passing his water. The physician used sounds for this retention and then he passed it voluntarily. This enlargement began four years ago, and these enlarged glands in the groin were first noticed last November. There has never been any abscess or open sore on the penis, but there was one little place on the scrotum. He says he has to pass his water very frequently and never feels as though his bladder is empty. He has a good deal of pain on micturition.

DISCUSSION.

DR. A. M. CARTLEDGE: I remember one or two cases something like this. This, however, is the first one I have ever seen that I would be willing to pronounce genuine elephantiasis, and it seems to me that diagnosis is justifiable. The one I saw was larger than this because the scrotum was affected, and it was a pseudo case associated with urinary fistula about the base of the penis. Ultimately these structures had broken away and an enormous hypertrophy resulted. The absence of the fistula here excludes the pseudo condition, and I think this is progressive and is the real elephantiasis, which is rare in this climate.

DR. AP M. VANCE: I do not know much about it, but something should be done to try to relieve the man. I think I would whittle on it and see if I could not reduce it. I would seek the head of the penis and get a good outlet in the hope that it might not be a genuine case. I think operation in olden times would not have proven satisfactory, but now a lot of it could be safely taken away.

DR. W. O. ROBERTS: If this is a case of true elephantiasis, what is the cause of the enlargement of the glands in the groin, irritation or what? Then the enlargement is not uniform. It strikes me it is a false form of elephantiasis. As to Dr. Vance's suggestion to whittle it off, that seems to me the only thing to be done. That penis measures seven and a half inches near the abdomen, sixteen inches around the swelling and two inches from the body it is six and a half inches.

FOREIGN BODY IN THE AIR PASSAGES.

DR. JOHN A. OUCHTERLONY: This is a very large subject and I have no intention of making a long discourse from it. It may be studied from the surgical standpoint and from the medical; it is from the latter that I wish to consider it. This object which I exhibit remained in the air passages for many months, the case being that of a white man, married, aged 59, robust, weighing 280 pounds. On December 20th he had been out trimming some trees and came into the house wet with perspiration, took a bath and went to supper feeling perfectly well. He had a ravenous appetite, and his wife had prepared pickled pigs' feet, of which he was particularly fond, and he partook with avidity. All of a sudden he felt something slip down his windpipe, choking him; he coughed violently, rushed to the window grasping his throat, and continued to cough violently for an hour and a half. In the course of three weeks, during which time he continued to have attacks of violent, harassing cough; he began to have fever, chilly sensations followed by febrile symptoms, and copious perspiration. He felt pain in the chest, most of the time on the right side near the right nipple. At other times he would feel something like the same sensation on the left side. He was convinced he had swallowed something, and believed it to be the toe of one of the pigs' feet, but none of the physicians who saw the case was willing to accept his statement. Of course, after a while the cough ceased to be so extreme, but he

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began to lose flesh, became weak and despondent and felt he was not going to get well. He became very emotional, his financial difficulties were magnified and his condition became quite deplorable. From 280 pounds he went down to something less than 200. The expectoration became fetid and abundant and the cough continued. He could get sleep only by the aid of an opiate.

On February 7 he had an unusually long and severe coughing fit and thought that he could not survive, but he got over it. Late in April I was called to see the case, but I was sick at the time and could not go, and after I got up I kept putting it off from day to day. After waiting for two weeks or more, his daughter called for me in a carriage and we went out together. I found him very much in the condition I have described, temperature 101° in the forenoon, breathing about 30, pulse 104 to 110, easily run up by the cough. His skin was cold and quite moist; the expectoration was copious and decidedly purulent. I sent out an antiseptic spit-cup, which was more than full the next day. The sputum was found to be composed of pus, mucus, streptococci and staphylococci, but without shreds of pulmonary tissue. So matters went on. I put him on tonics and the treatment I usually adopt in streptococcus infection, creosote in ascending doses, with a respirator which enabled him to get into the lungs a good deal of creosote. He had to take heart tonics, iron and so on. Opium was given in small doses to enable him to sleep.

On May 26 he had an unually violent attack of cough, lasting for an hour and a half. He was completely exhausted and thought the end had come. All at once he cleared up his throat and out came this fragment of bone.

The interesting part to me does not relate to the operative part of the subject and not so much to the presence of the foreign body in the larynx as to foreign bodies in the bronchi. This was evidently a case where the object was in one of the bronchial tubes. A good many cases of this kind have occurred where they have found their way into the air passages, waking and sleeping. Sometimes death ensues at once and at other times more or less serious complications result. But objects may exist in the air passages for a very long time. One case is related where it remained for sixty years. In seven out of fifteen cases reported by Durham the body was in the larynx and five in the trachea. Bourdillon reported 150 cases; of these 35 were in the larynx, 80 in the trachea, 20 in the right bronchi, 15 in the left. So it seems established that the right bronchus is the one in which the body tends to become located if it goes below the bifurcation. The most numerous cases are those in which the trachea is the seat. As to the result, a great many of these are expelled suddenly and many are retained. Many are operated on. Out of a thousand cases by Weiss, 72 % of those operated on recovered, and 77 % recovered without operation. But even those who recovered so far as to expel the body did not ultimately get well. Quite a number died from remote effects, the cause of death varying very much. Asphyxia, pneumonia, abscess, laryngitis, phthisis and so on developed. In one remarkable case the body ulcerated its way through the bronchus, passed through the lung and finally ulcerated through the external integument. A suppurative pleuritis now and then occurs.

The symptoms are the part of greatest interest to me. In this case a very remarkable fact was observed, the physical signs changing from side to side. This indicates to me that the body was sometimes in the right bronchus and sometimes in the left. The body was not impacted, and the absence of tracheitis was so marked that I do not believe the foreign body was in the trachea. The symptoms are first of all diminished inspiratory dilatation of that half of the thorax. In this case that was observed on the right side. At the

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same time there was increased respiratory movement on the opposite side. Diminished descent of the diaphragm on the affected side is also noticed. The respiratory murmur is absent or enfeebled on the affected side and frequently exaggerated on the opposite side. A very remarkable fact is that the percussion note is not at all disturbed in proportion to the auscultatory signs. Weiss lays special stress on three symptoms. First, the wheezing sound in respiration. That was absent in this case, probably because the object had been in the bronchus so long. Second, diminished pectoral fremitus and a palpable thrill of the chest wall on inspiration and expiration. Cohen calls attention to the fact that occlusion of the right bronchus causes absence of murmur over the lower lobe of that side, while the same condition in the left affects the entire left side. In this case the thrill may have existed at one time, but it was not present when I saw the case. There was a decided dullness over the lower part of the right lung. All the other signs were present, except wheezing and the peculiar thrill that Weiss speaks of.

On May 26 the body was expelled. I saw him to-day and he has gained ten pounds, is cheerful and feels that he is going to get well. Expectoration has diminished very much, the cough is less, and on listening to his chest I found that the auscultatory signs and the percussion note were about normal. The two sides were so nearly alike that no one would suspect there had been such serious disturbances.

DISCUSSION.

DR. A. M. CARTLEDGE: I have had very few of these cases. One was a boy who had inhaled a piece of cornstalk about an inch and a quarter long and as large as my index finger. It stayed in for four months, and he had a buzzing sound at the point of the interruption of the air current. He was fortunate enough to have a violent attack of coughing one day while walking and ejected it. He made a speedy recovery.

I think it is wonderful that a foreign body of this shape and size could get back in this way. I think a case Dr. Morrison reported is equally remarkable, where a chest wound was packed with iodoform gauze, a cough developed and the patient eventually coughed up nine or ten inches of gauze, which had gone entirely through. It shows the wonderful power of nature. The thought occurred to me that the reason of the peculiar sound often heard in the bronchus in Dr. Ouchterlony's case is to be found in the enormous amount of secretion.

DR. T. C. EVANS: It is a very unusual case. My experience has been confined to foreign bodies in the trachea only. It seems peculiar that a body of this size should pass through the chink of the glottis instead of the esophagus, for we all know the force necessary. Usually when a foreign body is introduced into the ventricle of the larynx there is a spasm and it goes through the esophagus.

DR. J. M. RAY: I have seen several cases of foreign bodies in the bronchi. The most wonderful thing is how they get through the chink of the glottis. One of the most interesting cases I ever saw was that of a clover blossom in the lung.

DR. T. H. BAKER: This was a very unusual case and I saw it frequently, both before Dr. Ouchterlony was called and afterward. I never treated the case, but treated several members of the family at the same time. On account of the continuous cough, high temperature, night sweats and loss of flesh, I thought it was tubercular, and advised him to have his sputum examined before Dr. Ouchterlony was called.

DR. W. O. ROBERTS: I have never known but one case where the foreign body was anything like as large as this that was expelled after pus formed and that was a horseshoe nail. I have always been under the impression that while the right bronchus is much larger, the left is in direct line with the trachea,

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and foreign bodies were more apt to go that way. This case I refer to had an abscess formation before the foreign body was expelled. I saw a case once that had been operated upon by Prof. Cowling where a cocklebur had been inhaled. He did a tracheotomy and used a little instrument like an eye speculum to keep the glottis open. He did not get it out at the time, so it was kept open three or four days. In his absence the child had a violent spell of coughing, pulled the instrument out and soon died. I made the post-mortem and found the cocklebur in the larynx.

The history of this case should have directed attention to the foreign body in the air passages. The coughing came on while he was eating.

While the statistics show that the larger proportion of cases get well without operation, I think the reason is that not enough of them are operated on. I think the indication in this case would have been to make a very large opening and tie it open. One reason of the failure in these cases is due to the fact that the opening is not made large enough to give exit to the body. I know of one case where this occurred. If the opening is large enough it is much easier to cough it up.

Dr. H. H. Grant: I saw a child 18 months old, brought here from Bedford, Ind., under the impression that it had swallowed a bean or a grain of corn. It presented the evidences of acute pneumonia, and there were many rales present. There were none of the sounds usually met with in the case of foreign bodies moving in the air passages. It was my belief that if there had been a foreign body in the air passages it had escaped. Dr. Wilson and Dr. Stucky saw the case, and did not believe there was any foreign body present. The child remained here ten days, and went home apparently much improved. About ten days afterward the physician wrote me that it had coughed up a bean about as long as a grain of corn. Whether this was absolutely the case or not, I cannot say. The family reported so to the physician, and he sent the foreign body to me. Whether it came out of the bronchus, neither of us knew. The child made a satisfactory recovery.

Dr. Wm. Cheatham: Dr. Vance and I saw a case some years ago with a similar history, and we did a tracheotomy. The patient died after, but just before death coughed up a foreign body. The foreign body was a piece of bone, and was as large as the first joint of my thumb.

I remember a case of a peanut in the left lung, and the child died.

I have seen many cases of foreign body in the trachea and many in the lung. I removed one once from the right bronchus with forceps. I made three attempts after doing a tracheotomy, and finally got the bean with the forceps.

In tracheotomy in these cases, I take a strong curved needle and a strong thread and fix the tissues on each side of the larynx, and place each of these threads in the hands of an assistant. It greatly aids in the operation. They can be tied around the neck, should you wish to leave the wound open.

Dr. J. B. Bullitt: In regard to the diagnosis of foreign bodies in the air passages, I would call attention to the fact that the X-ray is an almost infallible guide to diagnosis. Where the foreign body is a bone or metal or wood it is very easy to detect. If it is a bean or grain of corn it is more difficult, but the X-ray should not be overlooked.

Dr. Ap M. Vance: I have seen three cases. One where a child 5 years of age inhaled a nail. It remained two years and a half and the boy was thought to be dying, and in a sudden fit of coughing it was expelled. For twenty-seven years he went on, a healthy young man, later practiced medicine. At the end of that time he had pneumonia. In August I saw him in a desperate condition and immediately excised the eighth rib and opened up a gangrenous abscess of the right lung which discharged an immense amount

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of foul material. He gradually recovered after an extensive sloughing. He went South that fall and abscess recurred and the wound was opened. He came back with the wound closed. He had a cough and examination revealed the presence of tubercle bacilli. He went to Colorado and abscess again occurred and the wound was opened. He has now been well for about two years.

The other case was that of a large St. Bernard dog, which had been sick for two weeks. I was convinced it had a foreign body in the trachea and did a tracheotomy, and in a few minutes a cough came on and he coughed up an ordinary marble. The dog got well.

The third case I saw with Dr. Cheatham, who will probably report it.

The essay of the evening was read by Dr. S. G. Dabney, entitled, Appendicitis from the Standpoint of the Patient. (See page 129.)

DISCUSSION.

Dr. Ap M. Vance: Dr. Dabney has given us a very valuable paper, and one which will make us more sympathetic with these backaches, the terrible thirst and other discomforts following abdominal operations. It is a perfect description, and it will do a great deal of good. We have been trying to laugh off these aches and pains heretofore. In trying to find out the cause of this terrific backache, I have thought that it is largely due to the fact that patients are put upon the table and kept in that position for so long. I have noticed that those who are longest on the table suffer the most. Patients with fractures, and others who are kept in bed for a long time, complain of the same ache in a less degree. I believe we could prepare our table in such a way, and bolster up the small of the back, and relieve a great deal of this strain. The thirst is a very troublesome feature. It is often dangerous for vomiting to occur, and the least bit of water frequently excites it. Sponging the face, washing out the mouth and the use of rectal injections will modify this to some extent. We are learning to do away with many of these troublesome symptoms. The thirst and the backache are the things that wear the patient out.

Dr. Turner Anderson: I listened to the paper with great pleasure. I have long felt that we carried our rules a little too far when we proscribed the use of opium for these disturbances. I was interested in hearing of the selection of a twelfth of a grain of heroin. I have always used morphine in twelfth of a grain doses. Since the heroin has acted so nicely, I shall try it next time instead of morphine. I congratulate Dr. Dabney and also his surgeons.

Dr. John A. Ouchterlony: I am extremely glad to see Dr. Dabney on his feet again and that the operation terminated so happily as it did. I congratulate the surgeons with equal heartiness, for if it is a pleasure to save life, it is ten-fold more pleasure to rescue a professional brother from the grave.

Dr. A. M. Cartledge: I think Dr. Dabney's paper is of great scientific value. It just about covers the ground of most of these cases, and a physician who has gone through it can give so much better description of it. I think Dr. Dabney can thank heaven he was not operated on eight or ten years ago, so far as the pain and thirst are concerned. Lawson Tait was the father of modern abdominal surgery, and we all followed him for years and stuck to his rules, and especially to that which said no water should be given for hours afterward. Now we know that people differ greatly in their susceptibility to nausea, and it is a great hardship to deny water in every case of operation on the peritoneum, when they might not have nausea anyway. I make it a rule to give a little water early and then a little more. If there is marked nausea beforehand I do not begin it. For the last three or four years I have been giving an entire glass, and if they throw it up it washes out the stomach.

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This is a great advance on the old treatment.

The backache is one of the most annoying things, especially to patients who have been up on their feet. If they have been in bed for some time they do not suffer so much. I am satfied that the cause is complex, and while the long continuance on the table causes the greater suffering, yet the anesthetic has much to do with it. I think it is a very serious thing to take an anesthetic. Numbers of people who have been under its influence for a long time get well, but I have had four or five in which I have afterwards found casts in the urine where I least expected them. I believe that this terrific backache is in the kidney region and after an anesthetic we have acute congestion of the kidneys. We expect to see a marked diminution in the secretion of urine, even where a great deal of water has been taken beforehand. I think the acute congestion from the anesthetic causes most of the backache. I have nothing to suggest as to its relief.

I would like to call attention, from the surgeon's standpoint, to the fact that Dr. Dabney walked into the operating room with this appendix ready to fall to pieces. That is why the little drain was used. I think the cause of the indigestion and flatulence was this appendix, and that he will have no further trouble in that regard.

Dr. Hugh N. Leavell: I was Dr. Dabney's attending physician at this time. I believe that possibly some of this flatulence might have been due to the condition of the appendix, but whether that was the cause of the appendicitis, or vice versa, I do not know. I have noticed for several years that he suffered from tenderness and flatulence, and frequently these attacks were severe, and I have been called up to know if I could suggest something to relieve him. Knowing the vagaries of appendicitis, I would every time go to his bedside rather than use the telephone. At no time was there any marked tenderness over the region of the appendix. The condition that presented itself on the morning of the operation was this: temperature normal; rectal temperature 99-+; tenderness over the appendix not marked, except upon deep pressure, and that below McBurney's point. While the pulse was accelerated, it was also intermittent, and that is a point I have noticed about these gangrenous appendices. I have verified this in a number of cases, one quite recently. I have felt Dr. Dabney's pulse often, and never observed any intermittency before.

As to the use of heroin, it did act very nicely. Quite recently I have verified that result by the use of a tenth of a grain after abdominal section. It does not seem to produce any after effects at all.

I think the point about this flatulence is exceedingly important in its relation to the appendicitis.

Dr. J. M. Ray: I congratulate the doctor on his paper and his personal appearance. In regard to the backache, I believe that something else beside the anesthetic plays a part, for we eye men see so much of this backache following cataract operations where anesthetics are not used. It is the most annoying thing we have to deal with. They nearly always have it. They have to keep quiet in a prone position and are warned not to turn on the side. I have been able to relieve many of these patients by a method of making the bed softer or by putting something under them. The best method is to place a pillow under the small of the back.

Dr. T. H. Baker: I want to add my congratulations and also express my appreciation of the excellent and interesting paper. Some weeks ago Dr. Dabney edified us with some personal experience with erysipelas and now he has given us the same with appendicitis. I think this considerate thoughtfulness entitles him to the thanks of this Society.

Dr. W. O. Roberts: I congratulate the doctor on his recovery and also on

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the excellent paper. As to the backache, in addition to the measures already spoken of, I have found great benefit in the application of cold water bags to the back. I think it is chiefly caused by the strain on the small of the back, since the cases following cataract would seem to do away with the idea that it is due to the anesthetic. There is a great strain on patients who lie perfectly still for a long time.

As to the heroin, I have used it in a number of cases, but in larger doses. I give from an eighth to a quarter of a grain with excellent results, though occasionally I get none at all. I agree with Dr. Cartledge that we have been keeping water from these patients too long. It is well to give them a little hot water, especially if they have lost much blood. Cold water and ice will bring on nausea.

Dr. R. L. Ireland: I congratulate Dr. Dabney on his recovery and thank him for the privilege of being present to-night. The only part I had was that of administering the anesthetic, and he has described that fully in the paper. He did just like we always want them to do—came in quietly and gave himself over to the physician and did as requested. There was no stage of excitement at all. We started with chloroform and carried him to the stage of unconsciousness and then changed to ether. He had a pulse of 120, which would intermit about every twenty-fifth beat. It took a large quantity of ether to keep him under. During the operation his pulse seemed to lose a part of its volume, so we gave him 1-30 of a grain of strychnia and 1-100 of nitroglycerine, which brought the pulse up but did not do away with the missing beat.

Concerning the backache, it stands to reason that it is due to both the anesthetic and the strained position. We frequently get it without the anesthetic as a result of strain. I believe the distress is greater when the anesthetic has been administered for a long time. The kidney secretion is materially diminished by the anesthetic. To overcome the pain in the back a pillow is excellent, applied also under the knees to change the position. The pillow under the back should be rather firm. I believe the administration of saline per rectum, for it relieves the intense thirst to a great extent, helps the kidney secretion and is also a heart stimulant.

Dr. Louis Frank: I feel Dr. Dabney is to be congratulated on his beautiful and perfect recovery. As to the backache, I believe the various points mentioned have a great deal to do with this pain, but I do not believe that it is entirely due to the anesthetic. I use very little ether, and I do not believe the position on the table has a great deal to do with it. Some of these cases have no backache at all. I think most of it is due to the rigidity of the muscles of the back in the effort to keep perfectly still. If the patients are allowed to turn over it is relieved in a very short time. If this backache were due to congestion of the kidneys, I believe we would get other symptoms, and I have never seen any blood or albumen following one of these cases. It seems to me the pressure within the vessels in acute congestion would cause something to appear in the urine.

As to the nausea and thirst, we are coming to change our methods in all abdominal work. We cannot treat any two cases alike. The symptom of thirst differs a great deal in different people, in proportion to the amount of fluid taken before the operation, the amount of blood lost and the length of time the abdomen is open. I instruct my patients to drink all the water they can a day or two before the operation. There are times when this does not have any effect at all, and I have also given saline in great quantities without any effect. In some cases, however, there is marked diminution in thirst.

Cases differ also as to nausea, some having none at all. In other cases where I felt like I could give them nothing by the mouth, I have seen the

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nausea cease at once after giving a glass of water. I make it a rule to give vichy or carbonated water in small quantities as early as possible after operation. If they vomit, I give it again.

As to the point made by Dr. Leavell, I do not believe that flatulence has anything to do with appendicitis, but that it was the latter that caused all the digestive disturbances. I do not believe functional disturbances occur nearly so often as many of us have thought. I also believe that an appendix such as this, has been subjected to previous attacks. I do not believe that any primary attack of appendicitis will result in gangrene, unless there has been a twisting of the appendix.

Dr. S. G. Dabney: I thank the members of the Society for their congratulations and kind expressions as to the paper.

[Reported by E. A. Forbes.]

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, June 26, 1903.

The essay of the evening, entitled "Glaucoma," was read by Dr. T. C. Evans. (See page 125).

DISCUSSION.

Dr. S. G. Dabney: Glaucoma is a very broad subject, and I will speak only of a few points in my own experience. I have seen two or three cases that were brought on by the use of mydriatics. One was a young Hebrew whom I saw shortly after I began to practice, with a history that his mother had had glaucoma. He made a perfect recovery under the administration of eserine. That form generally gets well without operation. The other case was that of a lady past 70, living in an interior town. I had operated on one eye for glaucoma five or six years previously. She had another attack after the physician used a mydriatic, but eserine was used immediately and I was called in. I found it necessary to do an iridectomy and she made a recovery.

I think a mistake apt to be made in diagnosis is in confounding a bilious attack with an acute glaucoma. Both are attended with pain on one side of the head and both have vomiting. I have seen two or three cases in which a diagnosis of a bilious attack might have been made and it turned out to be glaucoma.

I think the problem of operation is a difficult one. Broadly speaking, the views of the essayist are generally accepted, that the sooner it is done the better. Now and then there is an exception. I recall one case of a lady past 82, whose symptoms had subsided, she had a vision of about 20-40, and was in feeble health; she had no pain, the field of vision was tolerably good, and I did not think operation was wise. It may have been an error, but my judgment still is that it was better to use myotics. She went to the springs, and later went to some distance. When she left I considered her condition too good for operation, and when she returned, too bad. Her vision had become greatly impaired, but she had good sight in the other eye. She is now about 84 or 85. Cases of that kind present a difficult problem as to the advisability of operation.

Coming down to the question of the operation itself, I have often been encouraged by a remark made by Dr. Knapp, that he frequently found it impossible to do a satisfactory iridectomy in acute glaucoma. I have found it one of the most difficult operations. Another great consolation is that an imperfect operation may yield satisfactory results. I remember one case of a lady who had refused an operation in the first eye until driven to it by the pain. She recovered much better sight than was expected, and when the other eye was attacked she consented to an immediate operation; I was very much dissatisfied with the operation itself, but she got excellent results. It must be remembered that some of these cases recover from an acute attack with-

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out operation. The tendency at present is to attribute the cause to gout and rheumatism, and it is important that the eliminative organs be kept active.

Dr. J. M. Ray: As to the etiology of glaucoma there is much difference of opinion. I believe, as a result of observation, that glaucomatous eyes are nearly always hypermetropic. I cannot recall a single case in a myopic eye. I believe also that there is a great deal of difference between acute and chronic glaucoma. Chronic glaucoma almost invariably occurs in elderly people who are the subjects of arteriosclerosis; the changes going on in the walls of the blood vessels is the predisposing factor.

I believe that von Graefe, who introduced iridectomy for glaucoma, stated at the time that all that it did was to relieve the tension. It does not stop the inflammatory process from going on in the eye, but simply changes the circulation of the eye so that there is a re-establishment of equilibrium between secretion and excretion. When none of the iris has been removed and yet an eye gets along favorably, it shakes our confidence in the belief that we relieve cases by removal of a large part of the iris. That was impressed on me by a case I now have on hand. In this case one eye was lost by operation and an iridectomy in the other was a failure. There are adhesions between the iris and the cornea as a result, yet the eye is practically as good as it was several years ago.

I believe that all glaucomatous eyes with marked tension are benefitted by operation, though there are occasional exceptions. As to glaucoma simplex, with few symptoms present beyond gradual failing of vision with little or no tension, I have watched them closely for months without detecting any tension, yet the clinical evidences in the eye all pointed to glaucoma. I do not see how we can expect any benefit from an iridectomy in an eye of that kind, yet many operators insist upon iridectomy in all cases. I remember Dr. Knapp said that glaucoma means iridectomy. My observation is that this broad statement does not hold true. I have seen a number of cases of simple glaucoma in which I operated on the first eye and lost it, and operation on the second was refused, and that eye went on for years with good vision. I have an old gentleman on hand now on whom I operated fourteen years ago in one eye. In the other eye he has constantly used a myotic, and he still has useful vision in that eye.

Another point about simple glaucoma is this: It has been my observation that the disease spends its force on the posterior segment of the eye. The anterior chamber may be normal and the pupil normal, yet the field of vision be very much contracted and the optic nerve atrophied, taking in the whole disc. I have seen them with little tension, yet pressure of the finger will bring on pulsation of the central artery with disc.

I think the subject is one on which no two of us can absolutely agree, but it is wise to follow out the idea that all cases of glaucoma with increased tension of the eye should be operated on, unless the physical conditions preclude. On the other hand, I believe simple glaucoma, in which we are unable to detect any tension in the eye, are not often benefitted by the operation, and that if treated with eserine, strychnine and the salicylates they will retain their sight as long as when an iridectomy has been done.

Dr. Wm. Cheatham: Dr. Evans has so well covered the literature of this subject that there is not much left to say except to give personal experience. The subject of glaucoma is to the oculist what appendicitis is to the general surgeon. Acute glaucoma is easily diagnosticated, and its treatment is clearly defined. It is the sub-acute and chronic cases which give us so much trouble. I have a case on hand in point now, in the person of a prominent lady in town. I found she had incipient glaucoma of right eye, with well

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established chronic glaucoma of left. She had had a sensation of something behind the eyes pushing them out. Eserine relieves this symptom. The question is as to whether to operate or depend upon feeding, hygiene and local medication. She is aged, feeble, and is improving under the above treatment. In glaucoma simplex the base of the iris is often found adherent to the sclera. The symptoms of acute glaucoma and iritis are quite similar except as to the condition of the pupil; the mistake in such a differential diagnosis is quite a serious one, and is often made by the inexperienced.

Dr. Evans referred to errors of refraction. In one of Gould's year books, he will find a statement made that a majority of cases of glaucoma in the early stages can be cured by the correction of an existing error of refraction. I believe in the refraction theory as a cause of glaucoma. We speak of the iris being pushed forward, and a closure of the angle of filtration causing increased tension and glaucoma, yet we have cases in which the iris is tied down, and the angle completely obliterated, with no glaucoma. It is an error to look upon cases of hemorrhagic glaucoma as a local disease; it is circulatory and general. In aortic regurgitation we get an arterial pulsation within the eye, which simulates some the pulsation seen in glaucoma. We have three forms of cupping the optic nerve: the physiological, atrophic and glaucomatous. Between the latter two there is some difficulty at times in differentiating. Iridectomy is the treatment in all forms. At times when to operate, and whether to operate, and whether or not to operate on both eyes, with only one involved, is a difficult question to settle. I regard a good iridectomy, with a clear lens present, the capital on the eyeball. There is much to be said on this subject, but the time is limited.

Dr. Wm. Bailey: I cannot discuss the disease, but I want to ask a question. There is a general opinion that atropine is a very potent factor in the causation of the disease. That being the most common of the mydriatics used, if it were a very potent factor, it seems to me the results would be more common. I think that if a person has one glaucomatous eye, and atropine should be used in the other, and glaucoma follow, it is not necessarily produced by the mydriatic. I think the importance of atropine as a factor in glaucoma is exaggerated. Even where it has been attributed to the atropine, if a close examination had been made, perhaps some of the symptoms of glaucoma might have been recognized. It may be that the drug would have some influence in increasing the liability to glaucoma, but that it is liable to produce the disease in a healthy eye, I must express a doubt.

Current Literature.

Cooke, Jos. Brown, New York: The Roentgen Ray in Obstetrics.—(*N. Y. State Jour. Medicine.*)

While it is true the pelvis of the non-pregnant woman can be studied by means of the rays, and deformities, exostoses, and contractions recognized, this work requires skill which can only belong to one of great experience in reading the negative or print. Photographs of the gravid uterus are not of any practical aid in diagnosis. The uterus and fetus up to the end of the fifth month of pregnancy, in living women, is no more than a filmy veil on the plate. Careful palpation, auscultation and ballottment will yield equally good results at this time. A rough idea of presentation, but none of position, may be made out when the fetus lies high up in the cavity, by photographing through the belly from one side to the other. In extra-uterine pregnancy, X-ray diagnoses are unsatisfactory. In multiple pregnancy it is suggested the rays might be of value. With the presence of two vertebral col-

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umns and two fetal heads the diagnosis of twins could be confirmed.

Brown, C. W. M., Elmira, N. Y.: Sterilized Milk, Pasteurized Milk or Clean Milk?—(*Archives of Pediatrics.*)

The author summarizes as follows: 1) Sterilization at 212° F. is of great value, especially in cities and to the poor, who lack intelligence, because it may be performed by any one and with simple or no apparatus. 2) Pasteurization at a temperature of 140° to 158° F., in closed vessels, for 15 minutes, is much to be preferred, this temperature being sufficient to kill the pathogenic organisms and lactic acid producing bacteria, without changing its taste or chemical properties from raw milk. 3) Fresh, pure, clean, raw milk, when obtainable, is much to be preferred. 4) It is now supplied in many large cities. 5) There is a strong demand by the laity for such milk. 6) It can be supplied to all cities and towns of even moderate size, if the profession put forth proper efforts to procure it. 7) All milk dealers should be licensed, which license should give health officers power to inspect premises and to require dealers to have herds tested for tuberculosis.

Hemmeter, John C., Baltimore: Intestinal Indigestion (Dystrypsia).—(*Medical News*).

The following formulas have been found useful for special symptoms of intestinal dystrypsia:

For putrefactive diarrheas, when associated with abdominal pain:

℞ Tanningen..... ʒi
Bismuth subgallate..... ʒii
Salol .....gr. xxiv
Denarcotized ext. of opium.....gr. iii
M. Ft. Caps. vi., or made up with
Elixir gentian
Essence calisaya (P. D. & Co.) aa..... ʒiii

Sig.: One teaspoonful four times a day.

For anorexia with fermentation:

℞ Tr. nucis vomicæ ..... ʒvi
Resorcin resublim...gr. lxxxiii
Tinct. amar..... ʒiii
M. Sig.: 10 to 15 drops every two hours.

Barker, Arthur E. J.: Some Improvements in the Method of Local Analgesia.—(*The Lancet*, July 25, 1903.)

In a clinical lecture the author spoke as follows: Several points must be borne in mind, among them the mechanical and physical difficulties in infiltrating all the nerves supplying an extensive field of operation. To inject the whole area so as to reach all its nerves would mean in many cases the use of much more of the toxic drug than is necessary, and in some cases so much as to be dangerous.

The author refers to certain observations by Braun, of Leipsic, on a method of overcoming the drawbacks incident to the usual mode of producing local anesthesia. This method is based upon the old experience that anything which retards or diminishes the circulation of the blood in a part enhances the potency of the analgesic agent. Experiments were made with adrenalin, a very small quantity of which was injected with B-eucaine (or cocaine) into the author's own arm, and subsequently into the arms of numerous patients. After the lapse of twenty minutes the part was quite blanched and wholly insensitive to pain, remaining so for about two hours. Adrenalin alone, used in this way, had no analgesic effect, while the results of the use of the combined solutions of B-eucaine and adrenalin were far superior to those produced by B-eucaine alone.

The most convenient way to prepare the solution is as follows: Powders each containing 0.2 gramme (3 grains) of B-eucaine and 0.8 gramme (12 grains) of pure sodium chloride are kept in thick glazed paper, ready for use. When needed one powder is dissolved in 100 cc. (3½ fluid ounces) of boiling

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distilled water, and 1 cc. of Parke, Davis & Co.'s solution adrenalin chloride is added when the fluid is cool. The solution is left in the Jena glass beaker in which it has been boiled, which is carefully covered and placed in a vessel of warm water to keep it at blood heat.

The injection is made by means of a simple syringe of glass and metal of 10 cc. capacity, with rubber washers, which can be sterilized by boiling.

To illustrate his method the author describes in detail the performance of an operation for the radical cure of inguinal hernia. The hernia is first reduced and the index finger is thrust into the external ring as far as possible. Along this finger the needle is entered and the inguinal canal is filled with 10 cc. of the solution. An endeavor is made to inject it all around the neck of the sac so as to reach the genital branch of the genito-crural nerve. The needle is then entered at the external end of the line of incision in the skin, and is made to infiltrate the *superficial* layers of the latter down to the root of the scrotum, making the resulting wheal at least an inch longer at each end than the incision is to be. Injections are then made at a point half an inch to the inner side of the anterior superior spine of the ilium, the needle being thrust towards the ilio-inguinal nerve, and at a point about one inch above the middle of Poupart's ligament where the ilio-hypogastric nerve is most conveniently met. Then the thigh is flexed and another syringeful is injected along the ramus of the pubis and the root of the scrotum or labium.

It is necessary to wait twenty minutes after the last injection for the full effect of the adrenalin to develop. The whole field of operation should be blanched and insensitive to pricks, but not to touch—analgesia, not anesthesia. The incision may then be made with confidence that no pain will be felt. The absence of oozing of blood is noticed. Only large vessels bleed at all.

Success depends upon a mastery of the principles, and practice in the details of the method. It is not enough to inject the fluid under the skin generally. Due regard must be had to the position and course of the nerves supplying the structures to be dealt with. The adrenalin compound, by slowing the circulation through the part, prevents the anesthetic agent from being rapidly washed away. The writer has used this method in thirty operations, including the radical cure of hernia, strangulated hernia, orchidectomy, removal of varicose veins, psoas abscess, loose body in knee, tumor of neck (actinomycosis), colotomy, Thiersch skin grafting, and cystic adenoma of the thyroid.

Obituary.

LOUIS D. KASTENBINE, M.D.

Dr. Louis D. Kastenbine died of Bright's disease at his residence July 29, after a lingering illness.

Louis D. Kastenbine was born in Louisville, January 1, 1839, son of Charles Augustus and Virbinda (Bridwell) Kastenbine. His father, who came to Louisville in 1820, was born in the Duchy of Hanover, Germany, and his mother was a native of Nelson county, Ky.

Dr. Kastenbine was reared in Louisville and educated in the public schools, being graduated from the High School in 1858 with the first class graduated from that institution. The turn of his mind was toward the study of medicine, and while attending the High School he had taken a special course in chemistry in the medical department of the University of Louisville under the preceptorship of the renowned scientist, Dr. J. Lawrence Smith. Immediately after his graduation he began the study of medicine, with Dr. Erasmus D. Foree and Dr. A. B. Cook as his preceptors. His course of reading under this tutorage continued three years, and in the meantime he attended the regular course of lectures in the medical department

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of the University of Louisville during the session of 1860–61. During a portion of the latter year he was also connected with the dispensary conducted by Drs. Cook, Yandell and Crowe, enjoying excellent clinical advantages.

When the Civil War began he attached himself to the Federal army as an acting medical cadet and was assigned to duty in Military Hospital No. 4 in Louisville. He served in that capacity—gaining valuable training and experience—until the fall of 1863, at which time he entered Bellevue Hospital Medical College of New York, from which institution he received his doctor's degree, March 3, 1864.

After his graduation from Bellevue College he spent some time in New York giving special attention to operative surgery under private instruction, and then returned to Louisville, where he established himself in the practice of medicine in the office of his former preceptor, Dr. E. D. Foree, an association which continued for several years.

When the Kentucky School of Medicine was established, in 1865, Dr. Kastenbine was selected for the position of first demonstrator of anatomy. He held that position for one year. Later he was associate professor of chemistry in the University of Louisville.

In 1878 he was elected to the chair of chemistry and toxicology in the Louisville College of Medicine, which position he held until he was elected professor of chemistry in the Louisville College of Pharmacy, a few years ago, which position he held until his death. He was special examiner of drugs of the port of Louisville for the United States Government.

Dr. Kastenbine was known all over the South as an expert chemist, and to him were referred many cases for expert analysis, stomachs of persons supposed to have met their death by poison, etc.

As a teacher of chemistry, he was one of the best in the South.

Dr. Kastenbine leaves a wife, who was Miss Annie Mooney, of Evansville, Ind., to whom he was married in 1883, and a daughter, Miss Louise.

JESSE C. HANCOCK, M. D.

Dr. Jesse C. Hancock, President of the Trimble County Medical Society, passed away Sunday morning, August 23, at his residence, in Bedford, Ky., aged 64 years. His remains were interred in the Odd Fellows Cemetery, at Bedford, Ky., on Tuesday afternoon, August 25, 1903.

The Trimble County Medical Society passed the following resolutions:

WHEREAS, In the providence of an All-Wise and Loving Creator our beloved President, Dr. Jesse C. Hancock, has been removed from his sphere of earthly labors, it is hereby

Resolved, That we, the members of the Trimble County Medical Society, recognize in the death of Dr. Jesse C. Hancock that the profession has lost one of its most influential, zealous and progressive members; as colleague, he was both loyal and generous; as a practitioner, he was self-reliant, conservative, vigilant, devoted; as a consultant, he was wise, courteous and honorable.

Resolved, That we publicly record our high appreciation of his ability as practitioner of medicine, and esteem for him as a gentle, Christian, honorable man.

Resolved, That we convey to the bereaved family of our deceased confrere the heartfelt sympathy of his professional associates here assembled.

Resolved, That a copy of this memorial be spread on the minutes of this Society, and published in the county papers and in the medical journals of the State.

L. G. CONTIS, M.D.
W. A. WRIGHT, M.D.
S. K. FISHER, M.D.
C. P. HARWOOD, M.D.
J. CALVERT, M.D.
J. W. MCMAKAN, M.D.
Committee.

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OF MEDICINE AND SURGERY.

"Alis Volat Propriis."

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TRAINING SCHOOLS FOR NURSES.

The trained, or professional, nurse is an innovation of but a few years, but must she be now regarded as a permanent fixture? No doubt but that in the beginning of her career it was intended that she should be in fact a *nurse*, and nurse only; but in the advance of ideas and occupations her calling must be recognized as a distinct profession, not so distinct, either, as the term implies, for her duties are so closely and intimately associated with the doctor's that she must be regarded in the light of an assistant, and many times as advisor and consultant.

These things being true, then, the medical profession must insist that the knowledge and requirements of the nurse must be commensurate with her calling. For such accomplishments we are to look to the training schools for nurses, for in them she is expected to be educated in her duties as a nurse. And here it does seem that the term nurse is not adequate to express her vocation. In fact, the modern graduate of a training school does not expect, nor is expected, to do but very little real nursing. For that occupation we must yet look to the "black mammy," or to those interested in the patient by the ties of blood. Can we call keeping a correct chart, taking the temperature, counting the pulse, using the catheter, noting the respirations, aspect of the dejections, the careful survey of symptoms, the knowledge of incompatables, poisons, etc., etc., duties for a *nurse?* A name more suitable should be given the one competent to do all these.

It goes without question that she should be able to arrange a comfortable bed, but so can a chambermaid. She should be competent to prepare a dainty meal, but so can the cook. As long as the term *nurse* is used, women of inferior accomplishments and education will be taken into the training schools, for both the applicant and principal will be governed more or less by the term as a guide of competency for admission. Viewing the matter as it now stands, the profession must make a special plea, if not demand, of the training schools that a more rigid curriculum be enforced, and that the requisites for admission be on a higher plane. A single mistake made by a nurse may not only injure the attending physician's reputation, but cause the death of a patient. The record each year proves the verity of this assertion.

The casual observation of most any training school for nurses will reveal the following conditions, viz.: 1. A number of illiterate, uneducated and incompetent pupils. 2. A number of weak, unhealthy and untidy pupils. 3. A number of students under the proper age for admission. No doubt but that those in charge of each training school would plead in rebuttal that every precaution is taken

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to insure against such a condition; but is it true, and is the one in authority to blame? It cannot be so argued, or affirmed, when the true facts are ascertained. The requirements for admission are at best very poor, and even these are seldom enforced. The applicant is usually received upon the evidence of some one, most any one will do, of good moral character, her fitness by education attested by the letter she writes, and her age—well, the age of any woman is in doubt—is taken upon her statement. So, too, is the question of her physical condition, always a vital one, attested in a very loose way. After the acceptance of the applicant for a test of her physical and mental accomplishments, she is put through the trying duties of a *novitiate*, which consists of scrubbing the floors, washing dishes, serving, or more properly speaking, carrying, the meals to patients, etc., methods which in themselves are calculated to make her undervalue and degrade herself. The course of instruction which she is expected to receive is embodied in a few talks by *attaches* of some medical college, rarely the professors. At the end of each day she is so tired out by her ceaseless duties as a servant that she sleeps during her recitations; and who can blame her? After a term of *two* years she is pronounced a competent nurse by the faculty (?) of the training school, and turned out upon the community to make her own living. What a merry spectacle this is, indeed, if not a complete farce. And these are the assistants at the bed of the sick that the physician is expected to meet. No wonder that in each year is recorded a few deaths accredited to a mistake in the dose of medicine administered by the *nurse*.

This statement is not overdrawn as regards many of the so-called training schools for nurses in this country. That it does not apply to all of them is equally true. Then let the deficient ones emulate the example of the better ones.

In conclusion it might be suggested: First—That all applicants should be required to undergo not only a *physical* examination, but also one which would demonstrate her *educational* requirements. Second—Her moral character should be investigated rigidly. If these are satisfactory, upon her reception she should not be compelled to do menial labor, nor regarded as a servant, but should receive instruction befitting her calling, indeed. A sufficient number of hours should be given her for recreation and rest. A regular and competent faculty should be employed to instruct, and not to further the interests of any medical college. A befitting fee, say one hundred dollars, should be required of each student per year to insure better material and command self respect. Besides, surely the education that would enable one to gain board and three dollars a day or more is fully worth this fee. The school term should not be less than three, possibly four, years, and after graduation competent nurses should be protected against incompetent ones by State (legal) enactment as now obtained in some States. J. M. M.

YELLOW FEVER.

Most important work has been done by special working party No. 1, from the Yellow Fever Institute of the Public Health and Marine Hospital Service, looking to a study into the etiology of

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yellow fever. This working party consisted of Drs. Herman B. Parker, George E. Beyer and O. L. Pothier, the seat of their investigations being Vera Cruz, Mexico, beginning May 12, 1902.

Following are the conclusions of this working party: 1. That the bacteriologic examination of the blood of cases of yellow fever during life and the blood and organs at autopsy performed immediately after death in uncomplicated cases is negative.

2. That *Stegomyia fasciata*, when contaminated by feeding on a case of yellow fever 41½ hours after the onset of the disease and subsequently fed on sugar and water for 22 days 1½ hours, can, when permitted to feed on a non-immune individual, produce a severe tack of the disease.

3. That *Stegomyia fasciata*, contaminated by feeding on a case of yellow fever and after varying periods killed, sectioned and appropriately stained, presents with regularity a protozoan parasite, the *Myxococcidium stegomyiae*, that can be traced through a cycle of development from the gamete to the sporozoite.

4. That *Stegomyia fasciata* fed on blood from a case of malarial fever, on normal blood, or artificially fed, does not harbor the parasite indicated in conclusion three.

The *Stegomyia fasciata* is not a native mosquito of our own country, but as it harbors the *protozoan* parasite, the cause of the fever, and is present in certain districts of this country, limits the quarantine necessary in an infected district to two factors, the individual sick and the genus Stegomyia.

This work, reported in the *Yellow Fever Institute Bulletin*, No. 13, is most valuable, confirming the work already done by this department, and points the way to a complete eradication of yellow fever from all infected ports, as has been done already in Cuba.

The collection of illustrations of the various species of mosquito forms a valuable contribution to the literature of the subject.

PITTING IN SMALL-POX.

Small-pox, at best a loathsome disease, is made more so because of the possibility of its disfiguring the patient almost beyond recognition as a result of the deep inflammatory reaction in the individual pustules.

The possibilities of vaccination in preventing small-pox, and in modifying the disease in those exposed, when performed early enough, is recognized in every civilized community, but in those cases not so fortunate, the question of deformity is important.

Brayton (*Journal of American Medical Association*) in discussing this question, states it is beyond the power of the physician to modify or prevent scarring or pitting. In his judgment, antiseptic baths have no place in its intelligent treatment without first curetting the pustule and evacuating its contents—nor have the nitrate of silver stick, tannic acid or iodin. The chief remedy is the 3 or 4 per cent. ointment of salicylic acid, applied after evacuation of the contents of the pustule, as it possesses the power of keratolization.

The red light treatment was systematically tried in 300 cases, and it was demonstrated "there is nothing in it." Those from the red light wards did no better, and were as badly pitted as others not so treated.

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Notes.

Dr. Raley Husted Bell, of New York, has assumed editorial charge of Love's *Medical Mirror*, with the following associate editors: Drs. J. W. Wainright, Edward Wallace Lee, New York; C. H. Hughes, St. Louis; Geo. F. Butler, Alma, Mich.; W. E. Fitch, Savannah; G. Frank Lydston, Chicago; George Brown, Atlanta, and Jos. M. Mathews, Louisville.

The July issue contains an excellent likeness of the late Dr. Love, seated at his desk, and a fitting tribute to Dr. Love from the pen of Dr. George F. Butler.

The International Journal of Surgery Co. announce the early issuance of a book, entitled "Nose and Throat Work for the General Practitioner," by G. L. Richards, M.D., of Fall River, Mass.

Louisville doctors believe in vacations. Among those who have left the city during the summer—

Drs. J. M. Mathews and H. H. Grant spent their vacations at Harbor Springs, Mich.

Dr. L. S. McMurtry in Canada.

Dr. Thos. Hunt Stucky at Atlantic City.

Dr. Henry Enos Tuley on a camping and fishing trip in Northern Wisconsin on Lake Court O'Reilles.

Dr. Jno. G. Cecil on the Pacific Coast and at Yellow Stone Park.

Dr. Curran Pope at Michigan resorts.

Dr. Orville A. Kennedy at Grayson Springs, Ky.

Dr. J. Rowan Morrison at White Sulphur Springs, Va.

Dr. Jas. S. Chenoweth in the woods of Maine fishing and hunting.

Dr. J. B. Marvin at Cape Cod and the White Mountains.

Dr. W. R. Blue at his summer home in Canada.

Dr. Thos. L. Butler in Canada.

Dr. H. M. Pusey in Colorado.

Dr. Frederick Muller, of Chicago, formerly Dr. Adolf Lorenz's assistant, has been engaged as professor of orthopedic surgery for the coming year at the Milwaukee Medical College.

The M. J. Breitenbach Co. have issued a set of bacteriological charts, sixty in number, which is a work of art and should be had by every physician. A copy will be sent free upon request of the above-named firm. The original sketches were in water colors by a leading bacteriologist of the country, the final press work requiring its passage through the press sixteen times.

County Societies.

The Bourbon County Medical Society held its regular meeting in the Council chamber, July 10 (Friday), at 3:30 p.m. Dr. C. G. Daugherty presented a case of lupus vulgaris serpiginosus of face and neck; also a supposed case of lupus of forearm, the former being under treatment by X-rays, to report later, the latter about healed under treatment with 25 to 50 % of pyrogallic acid in vaseline, followed by mercurial plaster. Dr. J. S. Wallingford read a paper on "Otitis Media and its Treatment." Discussion by Drs. Ussery and Daugherty. Dr. Louis Frank, of Louisville, then read a paper on "A Plea for Better Diagnoses of Abdominal Diseases." Discussion followed by Dr. Julian McClymonds, of Lexington; Dr. John Scott, of Lexington; Drs. Wallingford and Daugherty.

The Society then adjourned for an informal dinner at Crosdale's restaurant. The Society would be pleased if Dr. Frank would present his paper to the Journal for publication.

The next regular monthly meeting was held with President W. G. Daily at Millersburg, Ky., August 14, at 3:30 p.m., a very fair percentage of members attending.

Dr. Dailey presented for diagnosis a case of colitis. Discussion followed

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by Drs. Ussery, Lapsley, Miller and Daugherty.

Dr. S. J. Anderson, of Clintonville, read a paper on "Cholera Infantum." Discussion by Drs. Ussery, Lapsley, Huffman, Miller and Daugherty.

Dr. C. G. Daugherty read a paper on "Ectopic Gestation Diagnosis and Treatment," and read the history of Dr. Wm. Kenney's case of "Ruptured Ectopic" treated by laparotomy with successful outcome.

The meeting adjourned for 6 o'clock dinner with Dr. W. G. Dailey.

Instead of its regular meeting the Fayette County Medical Society held a smoker at the residence of Dr. Barrow. Dr. L. S. McMurtry, Dr. Samuel Willis, of Pine Grove, and Dr. Chas. A. L. Reed (ex-President A. M. A.), of Cincinnati, were present as guests of the Society.

Dr. Reed addressed the Society on the need of more care in exhausting medical treatment before resorting to surgery in gynecological work. Drs. McMurtry and Willis led the discussion.

About a dozen Lexington physicians are away on their vacations, making those still at home very busy.

Book Reviews.

Brewer's Surgery. A text-book of Surgery for Students and Practitioners.

By George E. Brewer, A.M., M.D., Lecturer on Clinical Surgery at the College of Physicians and Surgeons (Medical Department of Columbia University), New York. In one octavo volume of 712 pages, with 280 engravings and 7 plates in colors and monochrome. Cloth, $4.00; Leather, $5.00, net. Lea Brothers & Co., Philadelphia and New York. 1903.

A book which gives but one or two operations for a certain surgical affection, which the experience of the author has found most useful and successful, and which eliminates from its pages theoretical discussion of subjects, the description of rare conditions and a review of the historical aspects of subjects will be found most useful by the rank and file of the profession. Works which consider these questions in detail are necessary from the standpoint of a reference book, but are too unwieldy for ordinary service.

The book is concise, yet full enough for general use, and the illustrations are good. It will be found very useful, and will certainly prove to be popular.

Medical Jurisprudence, Insanity and Toxicology.

By Henry C. Chapman, M.D., Professor of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College, Philadelphia. Third edition. Thoroughly revised, greatly enlarged and entirely reset. Handsome 12mo. volume of 329 pages, fully illustrated, including four colored plates. Philadelphia, New York, London: W. B. Saunders & Co., 1903. Cloth, $1.75 net.

This book is much smaller than the one above referred to, but covers the field very thoroughly and completely. It has reached its third edition, which is considerably enlarged over the previous ones.

The author's wide experience as Coroner's Physician of Philadelphia eminently fits him for the production of a useful book, which this one before us will be found to be.

Organic Nervous Diseases.

By M. Allen Starr, M.D., Ph.D., LL.D., Professor of Diseases of the Mind and Nervous System, College of Physicians and Surgeons, New York; Consulting Neurologist to the Presbyterian, St. Vincent's Hospitals, etc. Illustrated. Lea Bros. & Co. New York and Philadelphia. 1903.

The works upon neurology of ten years ago are now almost out of date, because of the rapid strides in the precision of diagnosis and treatment of these diseases. This is due to the close application of the men devoting their lives to this work and to the analytical study of the clinical and pathological material presented.

Dr. Starr has presented a work which is most thorough and complete in every detail. The chapter upon the Structure of the Nervous System contains all that is latest in this new portion of neurology. The neurones are minutely described, this portion of the chapter being profusely and well illus-

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trated. This leads to the microscopic description of nerve tissue, it pathological anatomy, various injuries to nerves, and neuritis.

The chapter upon Neuralgia is one of the most satisfactory in the book, as are also those upon Anterior Poliomyelitis and the Muscular Dystrophies.

Cerebral localization is carefully considered, this chapter being well illustrated.

We see nothing in this work but what can be commended.

The Practical Medicine Series of Year Books.

Issued monthly, under the editorial charge of Gustavus P. Head, M.D. Vol. v., 1903, April. Obstetrics. Edited by Reuben Peterson, A.B., M.D., Professor of Obstetrics and Gynecology, University of Michigan. Year Book Publishers. Chicago.

Favorable comment has been made upon this series before. They are excellently compiled, and all the world's latest and newest literature may be found in them. The volume admirably sustains the reputation made by its predecessors.

Special Diseases of the Abdomen, with Special Reference to Diagnosis.

By Richard Douglas, M.D., formerly Professor of Gynecology and Abdominal Surgery, Medical Department of Vanderbilt University, Nashville, etc. Illustrated. P. Blakiston's Son & Co. 1903.

The author's reputation as a careful, painstaking, fearless and successful surgeon bespeaks for his offspring, this pretentious volume of 885 pages, a most careful perusal. That we are not disappointed needs not be said. He has prepared most carefully a book of great practical use to general practitioner and surgeon.

One naturally turns first to the chapter upon Appendicitis, for no condition in the abdomen is of such vital interest to practitioner and surgeon or occurs as frequently as this.

He gives the following varieties of appendicitis: 1. Non-suppurative, divided into, a. endo-appendicitis; b. interstitial. 2. Suppurative, a. intratubular, b. intra-mural, c. peri-appendicular. 3. Perforative. 4. Gangrenous. Treatment of this condition is disposed of in barely two pages, dismissing the medical treatment with a quotation from Osler, viz., "There is no medical treatment of appendicitis;" and while not subscribing to the statement that "every case of appendicitis should be operated upon as soon as diagnosed, unless the patient is *in articulo mortis*;" he states that *every case requires operation at some time.* We wish space permitted free quotation of the remainder of this chapter, which is positive yet conservative.

The chapter upon Gall Stones is very complete, especially the tables of differential diagnosis, and penetrating gun-shot wounds of the abdomen are described in detail.

The work can be recommended most highly as thorough, practical, scientific and conservative.

A Text-Book of Modern Materia Medica and Therapeutics.

By A. A. Stevens, A.M., M.D., Lecturer on Physical Diagnosis in the University of Pennsylvania; Physician to the Episcopal and St. Agnes Hospitals, Philadelphia. Third edition, greatly enlarged, rewritten, and reset. Handsome octavo of 663 pages. W. B. Saunders & Co. 1003. Cloth, $3.50 net.

Advances in this department with rapid additions to the pharmacopœia have necessitated the rewriting of this entire work, the first edition of which was issued in 1894.

We doubt the wisdom of the rearrangement of the drugs in this edition. In the former editions they were arranged alphabetically, in this according to their pharmacologic action. The latter is of use to the student and lecturer, but not of so much value to the practitioner, as many drugs can be placed in several classes.

The newer remedies which have been proven of worth by extended trial have all been included in the text. One remedy, adrenalin, among these newer ones illustrates the point just brought out, its consideration among the circulatory stimulants, on page 58, as a hemostatic, on page 374, and as an alterative, on page 338.

The work is thorough and accurate, and is to be commended.

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LOUISVILLE MONTHLY JOURNAL

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Original Communications.

SALPINGITIS.*

BY JAMES VANCE, M.D.,
LOUISVILLE, KY.

It is not the purpose of this paper to treat of this subject in an exhaustive detail, but rather to dwell upon certain points of the etiology, pathology and treatment which are still of vital interest to every surgeon, because the points to be considered are still looked at from different view points by many surgeons.

All cases of salpingitis are due to inflammatory processes caused by septic infection, almost invariably from extension through the uterus. In a very few cases the source of infection is the appendix, the peritoneum in tuberculosis, and still more rarely the intestine.

The pathogenic micro-organisms causing these inflammations are the gonococcus, staphylococcus aureus and albus, streptococcus, colon bacillus and tubercle bacillus. There are rarely found some other micro-organisms, as bacillus ærogenes capsulatus, bacillus pyocyaneus, and bacillus pyogenes fetidus, but in more than 99 in 100 cases one or more of the first-named organisms will be the exciting cause. It is a strange fact that several bacteria growing together are always more virulent, not only collectively, but individually, so that in especially virulent cases of tubal infection it is not uncommon to find as many as four of these organisms together. It is further true that all these organisms, except the tubercle bacillus, when confined and limited in food supply and subjected to their own excretions rapidly lose their virulence and in three to five weeks' time die. This is easily proven by test tube experiments, the rule being, the younger the growth the greater the virulence. That this same course takes place in infected tubes is proven by clinical experience as well as by experiment.

Among prostitutes the gonococcic infection is most frequent, and is almost certainly the infecting agent in any case if there have been no abortions or miscarriages, as the gonococcus is practically the only organism that can invade a healthy endometrium. However, after abortion, miscarriages, or even labor, any of these organisms may readily invade the denuded, succulent walls of the uterine cavity and further, the tubes. Tubercle infections are occasionally contracted through the uterus, and occasionally the initial focus if infection is in the ovary or tube, but by far the most frequent source of this infection is from the peritoneum.

Any time that the endometrium is denuded, and infection occurs, the bacteria may enter the cervical lymph spaces and reach the ovaries and tubes through the lymphatics. In such cases decided thickening and induration in the broad ligaments are to be felt at the sides of the uterus. This parametritis is especially liable to follow curettement under unfavorable conditions.

* Read before the Louisville Surgical Society. (For discussion see page 185.)

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I shall not dwell upon the statement that abortion, miscarriage, gonorrhea, and parturition are the potent factors causing infection, because on this we are all agreed.

The pathology is that of an inflammation caused by colonization of the bacteria present, thereby producing toxins which, acting upon the cells adjacent, produce all the way from a mild poisoning of those cells to death and necrosis of the same, accompanied by a copious exudation of serum and leucocytes, called suppuration. This inflammation may be stopped at only a few colonies by the natural resistance of the tissues, but generally spreads to its anatomical limit—tubes alone in mild cases, and to the ovary and peritoneum in severe cases. When the mouth of the tube is stopped up by inflammatory debris the process always becomes more extensive than where there is free drainage into the uterus.

The extent of the inflammation depends, first, upon the number and virulence of the micro-organisms present; second, upon the natural resistance of the tissues. The virulence of the micro-organism is increased by transmission from one case to another, as, for example, by infected hands or instruments. The resistance of the tissues is increased by its blood supply and the general good condition of the patient. On the other hand, one attack of tubal inflammation lessens the resistance of the tissues to subsequent invasion.

The symptoms are too well fixed in the minds of all to call for description here. The diagnosis, for practical purposes also, as a rule, offers no especial difficulties.

I shall not dwell upon the non-operative treatment, but merely mention in passing that most primary infections of the tubes when most severe yield to rest in bed, thorough purgation, hot applications to relieve pain, and vaginal douches to facilitate drainage. It is surprising what severe cases of gonogoccic tubal infection, especially, will be relieved by these simple methods. Complete rest in bed must be insisted upon, however, because the prime factors of curing any inflammatory process are rest and drainage.

Tubes once infected are prone to reinfection, and from carelessness of patient, thinking it amounts to little, a slight inflammation goes on to a chronic inflammation; the uterine ostium of the tube becomes stopped by inflammatory debris, and an abscess results. The walls of the tubes are distended and thinned by the accumulation of pus and the necrosed parietal cells. Thus the inflammation extends to the peritoneum soon after stoppage of the tubes and causes a local peritonitis. This invasion of the peritoneum is met by the great omentum capping itself over the affected area. In case the omentum is not long enough to reach the tube the nearest coils of intestine adhere to the inflamed area by reason of the copious exudate of lymph poured out by the inflamed surface. When such a condition of affairs is reached, operative procedure is demanded.

There are two routes of operation, supra-pubic and vaginal. The latter route is to be chosen, in my opinion, only where supra-pubic section cannot be safely done, and practically limits it to drainage of abscesses as a palliative measure for supra-pubic section later, since vaginal section and drainage rarely leads to permanent cure.

There are few intra-abdominal operations of greater mortality and greater anxiety to the surgeon than pyosalpinx with numerous widespread adhesions. In undertaking an operation for pyosalpinx the surgeon is to bear in mind two all-important principles. First, to save the life of his patient. Second, to do such an operation that afterward she will be well. There is no more important factor in doing a successful operation than that it should be done at the proper time.

The time for operation is always late in the disease, never early. The reasons for this are:

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First—Because the tube is a useful organ, and should never be sacrificed until every effort has been made to save it.

Second—It's position in the pelvis is such that any inflammation extending to the peritoneum is easily localized and shut off from a general peritoneal infection, consequently there is little danger to the patient's life by waiting.

Third—The infection becomes less and less virulent as the disease goes on, with a consequent marked decrease in liability to peritonitis following the operation. So true is it that the infecting bacteria gradually lose their virulence, after the acme of infection, as time goes on, that after about five weeks from date of infection, and sometimes sooner, the pus is often found sterile, no micro-organisms being shown, either by microscopic examination of the pus, or by cultures made from the same, thereby proving its sterility.

Fourth—Many adhesions formed at the height of the disease reabsorb, leaving fewer, smaller and less vascular adhesions, causing less hemorrhage and oozing than more recent ones. Further, and more important, the walls of the intestine adherent to the tube are not nearly so apt to be necrotic and consequently bear separation of adhesions and suturing of wounds left in intestine far better. Temperature, pulse and general condition of patient are the guides for the proper time to operate. The temperature is the most important, and it is rarely safe to operate when the temperature is running over 100° F. The temperature is almost a direct index to the stage of bacterial growth.

The operation itself offers several points of interest. The incision should be at first made small. The uterus and tubes are then explored, and if the adhesions are dense and numerous, or a sac of pus is present, the incision is at once enlarged sufficiently to give free access to the pelvis. With the patient in the Trendelenburg position, the intestines are pushed towards the diaphragm and completely shut off from the pelvis by large sterile pads of gauze wrung out of hot water. Dry sterile pads are efficient, but I do not believe them as good, because the hot wet pads are soothing to the exposed intestines, and being wet, are impervious to air, preventing shock from exposure to air many degrees cooler than the intestines as well as the irritating effect of the air itself. Dry gauze is not impervious to air, is harsher, and irritating to the intestines.

The intestine being carefully isolated the adhesions are next gently and carefully separated and the tube and ovary freed. The separation of adhesions is greatly facilitated by the enlarged incision by reason of which all very dense and difficult adhesions can be broken up by sight, greatly increasing the safety of the procedure. It is best to free both tubes and ovaries before tying off one side, because this permits a better adjustment of the uterus and safer seating of the ligatures.

Some men prefer to tie off the broad ligamentous attachment of the tube and ovary with a double strand of large catgut, transfixing the pedicle in the usual way, and tying on either side; but owing to the natural stretching of catgut and its consequent tendency to slip, most men regard its use as unsafe and a wanton risk to the patient's life.

More recently several surgeons claim to have adopted the method in which the ovarian artery is tied with catgut, the tube and ovary is then cut away and the two layers of the peritoneum are united by a running suture of plain catgut. Pryor goes so far as to say this is the only proper way to remove a pyosalpinx. This method is a very satisfactory one for simple cases, but where the pedicle is much thickened, very vascular and friable, as is the rule, rather than the exception, this method can be used with neither safety nor simplicity.

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I believe that the time-honored, tried, and proved, silk ligature is the best at our disposal. When the pedcle is too large to tie by simple transfixion more sections can readily be made.

When holes are torn through the intestine in separating adhesions they should be closed transversely if possible to prevent constriction of the lumen of the gut. Catgut is the preferable suture, because it is not so apt to form a cicatricial band, as does silk, on account of its elasticity and later absorption. Not only perforations should be closed, but all lesions to the gut extending into the muscular layers or even through the peritoneum, if the tear be at all extensive.

Drainage is the question for which no iron-clad rules can be laid down, but is rarely necessary, except where there is extensive "weeping" from the denuded surfaces resulting from breaking up extensive adhesions, and where pus has escaped into the peritoneal cavity. This is bound to remain a matter of judgment in each individual case, but I believe is much more often employed than necessary.

The best drain is a thin rubber tube cut the required length with a gauze wick pulled through it. The next best is a glass drainage tube with the gauze wick pulled through it to obviate the necessity of having to remove the drainage by a long-tipped syringe—the great objection to the old method of using the glass tube.

There are many important points which I am well aware I have not touched in this paper, neither am I unmindful of the importance of proper closure of the abdomen and the after treatment, but their discussion has no place in this paper. In conclusion, it is the master of detail, the man who works rapidly, but not hurriedly, who knows pathology and makes intelligent use of it in each case before him, who cures his patients, and that with a low mortality.

EVERY-DAY PROBLEMS IN INFANT FEEDING.*

HENRY ENOS TULEY, M.D.,

Professor of Obstetrics, Medical Department Kentucky University; ex-Secretary and Chairman Section on Diseases of Children, American Medical Association, etc.

LOUISVILLE, KY.

The every-day problems in infant feeding are many and complex, requiring careful study and observation of the individual infant. The necessity for a close watching of the feeding of infants, both while at the breast and when artificially fed, cannot be too strongly emphasized.

While, as a general rule, it may be stated the ideal food is a healthy breast milk, this is not always the case, for not infrequently a mother has an abundant supply but secretes a milk which is unsuited to the needs of her own baby. These cases, however, are the exception, and it is infrequent that we find an unsuitable breast milk which cannot be changed by suitable remedial measures, hence I cannot refrain from saying a word against the unnatural mother who refuses to nurse her infant from purely selfish reasons, that she may have more time for society or pleasure. No physician should be a party to this or encourage it in any way, unless it can be plainly shown by most careful examination that the milk is unsuited and beyond remedial measures. The few cases I have seen during the past year, where the necessity for weaning has arisen early from unsurmountable reasons, have been enough to impress on me the unwisdom of voluntarily surrendering a good breast milk supply for the uncertainties of artificial feeding.

The mother of one of these children began to menstruate four weeks after her delivery. Immediately her baby, which was doing well previously, began vomiting and purging. The second month, with a similar occurrence, I

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Diseases of Children. From Journal American Medical Association.

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was called to see the child in an exactly similar attack, and an examination of the breast milk showed it to be heavily loaded with colostrum corpuscles. The child was ill for several days, was weaned, and has until the past two months been a constant care and anxiety, because of the difficulty of finding a suitable food for it.

During the first week a newborn baby frequently exhibits a temperature of 101°, 102° or 103°, which will be reduced on the advent of the mother's milk or after an artificial feeding. I have recently dismissed a case which showed a temperature of 104° on the fourth day. The mother, a multipara, had large, pendulous breasts, but the secretion of milk was very slow; not until the fifth day were the breasts at all full, and were at no time tense or engorged. A feeding of modified cow's milk, from two to four drachms, after each nursing reduced the temperature to normal in two days. This condition, known as "starvation temperature" (Tuley) or "inanition fever" (Holt), is not generally recognized, and the recital of this case alone should be an incentive to have the temperature of all newborn babies taken at least twice daily during the first week after birth. In the presence of a temperature an artificial feeding of a modified cow's milk is indicated; it can do no harm even if there be another cause present for the rise, but it will generally be sufficient to cause a satisfactory and permanent reduction.

There may be an ample supply of a good milk, but the absence of a serviceable nipple may prevent the child's obtaining it. I have often seen this, and it is now my routine practice to make as early an examination of the breasts and nipples of a pregnant woman as possible, especially in primipara, in order to give instructions in the massage of flat and depressed nipples. By massage and training a very serviceable nipple can be made from an unpromising one if the treatment is begun early enough. The wearing of tight corsets or clothing should be advised against during pregnancy, but especially in the presence of flat or depressed nipples. A careful inquiry should also be made of multipara in regard to their lactation history, as having a bearing on the possibility of nursing the new baby.

An infant's progress may be watched by noting its weight, the presence or absence of vomiting, the stools, the time and amount of crying, but the most important, perhaps, all else being equal, is the weight. A newborn baby loses its weight during the first week, but by the end of the second week, or sooner, it should have regained its birth weight, and after this it should gain not less than four ounces a week.

A stationary weight, or a loss after the second week; vomiting, not simply a slight regurgitation; colic; continuous crying; diarrhea, with green, mucus movements containing curds, should be an indication for a close investigation of the breast milk, the frequency and time of nursing and the daily routine of the baby's life.

I have had very satisfactory results from the employment of Holt's milk test for the clinical examination of breast milk, and have had good results in modifying breast milk to meet indications as shown by this test taken in connection with the symptoms presented by the child.

A high percentage of proteids is evidenced by colic, crying, with a doubling up of the legs, tense abdomen, green, mucus stools containing curds. This very often occurs while the mother is lying-in, but as soon as she gets up and is enabled to take the proper exercise, the increased proportion of proteids is generally decreased. Should this relatively high percentage of proteids with low percentage of fat persist, and the plentiful supply keep up, much help can be had from pumping or milking out the fore milk from the breast, the child being allowed to nurse only the middle milk and strippings. Taking the child from the breast before it

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has finished nursing and giving it a small quantity of barley water, previously dextrinized, from a bottle, will often relieve the colic, lessen the diarrhea and make the curds smaller.

Too much fat, which I have met but a few times, causes vomiting and diarrhea, with few or no curds in the movements. If too much fat is present there may be found in the stools small round masses which resemble curds very much, but are smooth and soft and not so white as curds.

A too small milk supply calls for active treatment. It is evidenced by a stationary weight or a loss in the weight of the infant; crying within a few minutes after leaving the breast and sucking vigorously on its fists after nursing. If the deficiency in supply is the only fault, it may frequently be increased by such galactogogues as nutrolactis or somatose, free drinking of milk, cocoa or chocolate and the cereal gruels. Alcoholic beverages are to be avoided, as they encourage the secretion of a milk with a deficiency in its life-giving properties and an increase in the watery element. If this does not correct the difficulty, the child should be put on a modified cow's milk, or suitable formula, in addition to the nursing, giving at first one or two drachms to an infant of four weeks immediately after a breast feeding, gradually increasing the amount as indicated. This will generally suffice to obtain a satisfactory report as to its weight.

Holt's plan of having weekly reports sent on specially printed cards is to be commended. This report, which includes the babies' weight, stools, sleep, etc., enables him to watch the progress of those babies under his care and to put the proper interpretation on abnormal movements, restlessness or no gain or loss in weight. In this way many babies could be saved perhaps serious attacks of bowel or digestive trouble by an early notification of abnormalities. Mothers are too prone to attribute digestive disturbances to teething, which, if promptly attended to, might prove of little moment; neglected, they might result seriously or fatally.

With a good milk supply, regularity of nursing, infrequent or no night nursing, a child will generally do well; a good supply with a disregard of these requisites will result, perhaps, in serious digestive derangements. Should a combined breast and artificial feeding be necessary, the one or two night feedings should be breast milk, if for no other reason than the convenience to the parents. The only objection to this is the possibility of the mother falling asleep and allowing the child to lie with the nipple in its mouth for several hours at a time.

A condition which may give rise to serious digestive disturbances is nursing from a cracked or fissured nipple. The milk is mixed with blood drawn from the crack, which results in an indigestion, vomiting, etc. Indeed, a fissured nipple may be so intractable as to prevent maternal nursing entirely.

We would advise against maternal nursing in a tuberculous mother, or one the subject of a serious puerperal infection. A suppurating mastitis is not a contra-indication to nursing, as it is an exception for the abscess to invade a milk duct. Regular nursing is an assistance rather than a detriment.

The problems, then, to be met in the supervision of breast feeding would be: 1. The increase of a too small supply. 2. Changing the character of the milk, (*a*) decreasing the proteids, (*b*) increasing the fat, (*c*) decreasing the fat. 3. To make serviceable nipples out of flat and depressed ones. 4. To supply an artificial or adjuvant food in case of a good but too small supply from the breast. 5. To continue nursing during a suppurating mastitis and retain the integrity of the gland after a subsidence of the inflammation.

The every-day problems of an entire artificial feeding are even more difficult of solution than those of breast feeding. It is not possible to have a set rule for guidance in all cases. Cow's milk for most cases is unquestionably best, but

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we frequently meet with cases in which no formula nor any method of home modification can be made to agree with the child.

It is my opinion that none of the artificial foods are suited for long administration to an infant. Sooner or later cow's milk must be given in some form to prevent the nutritional disorders which are certain to follow their long and exclusive administration.

In the choice of artificial foods, and no one food or one dilution or combination will agree with every child, those should be selected with which it is possible to combine milk in some proportion. Condensed milk in combination with some of the milk foods or a small percentage of cream can frequently be borne when other foods or combinations have failed. Without some such combination the results from an exclusive condensed milk feeding will be far from satisfactory. Condensed milk has much to commend it; it is one of the best foods for the poor and ignorant, is generally within their means, is easily kept sterile and is easily prepared. Its chief advantage lies in the small percentage of fat when the milk is diluted according to directions sufficiently to bring the percentage of proteids within the limits of digestion. Its long continuance results in such nutritional disorders as scorbutus and rachitis, and when the necessity arises for giving another milk it is difficult to change because of the taste acquired for the over-sweet condensed milk.

If a cow's milk is to be used, and it should be tried whenever possible, it is necessary for the physician to master the problems of percentage feeding and adopt some method of calculation of the prescription. There are a number of these by which very satisfactory results can be obtained at home.

He should be perfectly familiar with the supply of milk, its analysis, place and mode of production and process of handling, modification at home, care afterward, care of bottles and vessels used in the modification.

Minute and careful written instructions should be given regarding the feeding of an infant, and these should not be diverged from at all. Like the treatment of typhoid fever in a child, eternal vigilance is the price of success. Trust nothing to nature unaided.

111 West Kentucky street.

CHRONIC GONORRHEAL PROSTATITIS.

BY P. C. LAYNE, M.D.,
ASHLAND, KY.

In discussing this question it must be kept clearly in view that there are two distinct conditions described, improperly it is true, under the appellation of chronic prostatitis. The one is chronic hypertrophy of the prostate, a disease affecting men in advanced life and which has very little in common with the present subject.

The other is a disease having its inception in men under 35, is usually of gonorrheal origin, and affects the prostatic glands and follicles, with at times extension to the seminal vesicles, vas deferens and epididymis; or to use the happy expression of Belfield, it is "an inflammation of the prostate and its appendages."

Etiology.—While chronic prostatitis may arise from trauma, calculus, cold, instrumentation of the deep urethra, imperfect sexual practices and the like, the majority of cases, 98 per cent. at least, occur from invasion of the deep urethra by the gonococcus of Neisser.

Just how frequently the deep urethra becomes infected in specific anterior urethritis cannot be accurately determined, but according to the best authorities this complication occurs in from 16 per cent. to 80 per cent. of cases. The number of chronic cases that follow acute gonorrheal prostatitis can only be approximated, but the condition is of sufficient frequency and importance to incite the practitioner to look well after the management of all acute cases that fall under his guidance.

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Symptoms.—The symptoms of gonorrheal prostatitis are general and local, the latter predominating in the majority of cases.

Of local symptoms the most important is the presence of a continuous or intermittent, glairy mucous discharge at the meatus, preceding and following micturition, and especially prominent after defecation, leading the patient to believe that he is suffering from seminal losses.

Macroscopically the fluid resembles semen, and several cubic centimetres may be passed in twenty-four hours.

Microscopically it is found to be made up chiefly of a homogeneous network containing in its meshes epithelial debris, pus corpuscles and the gonococci of Neisser. Writers speak of a bloody discharge following micturition and defecation, but I have never seen it in chronic cases of long standing.

There is usually, but by no means in all cases, a sense of fullness in the perineum, with perhaps tenderness on deep pressure, and in some cases the individual complains of "something heavy" filling the rectum.

There may be shooting pains along the dorsum of the penis, especially at the close of micturition, with a feeling of fullness in the glans or a pricking sensation near the frenum; fulgerant pains in the testicle and thigh and neuralgic pains in the rectum are also not uncommon.

The act of micturition may be more frequent than normal, but to this rule there are many exceptions; the force of the stream is diminished and at the close of the act there may be dribbling of urine associated with the glairy discharge above mentioned.

There is diminished or total loss of sexual power, the erections are weak and imperfect, and ejaculations premature and without force, and often followed by a depressed, fainty feeling.

The general symptoms are those of neurasthenia, and depend more upon the individual's nervous stability than upon disease of the prostate *per se*.

Patients of nervous temperaments naturally become melancholy and depressed over their condition, imagining the discharges to be seminal losses, and that they have spermatorrhea, "lost manhood" and the like, and particularly is this the case if they have been perusing quack literature on the subject.

Diagnosis.—The diagnosis must be made from true spermatorrhea, and this can only be done with the aid of the microscope and careful attention to the history of the case.

True spermatorrhea is a rare affection, and the microscope shows abundant spermatozoa in the discharge, whereas in prostatitis the absence of spermatozoa (present at times, in exceptional instances), and the presence of pus cells and gonococci, and the history of the case will lead to a satisfactory diagnosis.

Prognosis.—Recent cases of moderate severity are readily cured by appropriate treatment.

Not so, however, with cases of longer standing. Here the skill and patience of the practitioner will be tested to the utmost, but in the large majority of instances perseverance will be rewarded by success.

Just what period of time gonococci may remain in the prostatic follicles has never been ascertained, but the writer has found them in one instance eighteen years after primary infection, and in several instances seven and eight years subsequent to the first and only attack of gonorrhea.

Noeggerath in 1876 affirmed that no well-marked case of gonorrhea in the male was ever cured, and if he meant by that statement that they were practically never free from the causative germ, my observations seem to substantiate his dictum.

While gonococci thus hidden away in the prostatic follicles may not prove virulent for the host that harbors them, they may, as is well known, under favorable environments take on increased virulence, and hence be the

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source of infection to innocent parties years after the primary disease has apparently subsided.

Treatment.—The treatment may be divided into local, general and hygienic.

The local treatment embraces thorough asepsis of the whole genital tract, the application thereto of alterative and astringent medicaments, and the employment of full-sized steel sounds every day or every other day as circumstances indicate. Cleanliness of the urethral channel is best secured by means of some such apparatus as the Valentine irrigator, as here the excessive pressure of the fluid distends every fold and sulcus of the urethra, and thereby thorough cleansing is secured.

For irrigating purposes a hot solution of potassium permanganate 1-6000 to1-3000, bichloride of mercury1-20,000 to 1-10,000, or a 2 per cent. solution of boracic acid may be employed.

Immediately after the cleansing the largest steel sound that will enter the meatus should be introduced and permitted to remain five or ten minutes.

In cases where it is necessary to produce greater stimulation, a hot sound should be introduced, followed in a short time by one that has been cooled by placing in ice water. A splendid way of applying cold is by means of the psychrophore, and it will prove very useful in those cases where the prostatic urethra is very sensitive.

On alternate days, according to the reaction following the treatment, five to ten drops of a 2 per cent. solution argenti nitratis should be carefully deposited in the prostatic urethra by means of a Keyes-Ultzmann syringe, after previous irrigation to remove all secretion from the canal.

It is a good plan to have the patient retain a few ounces of urine in his bladder that he may neutralize the silver solution in case the irritation is too great.

In cases of long standing that do not respond quickly to the above mentioned solution the strength may be gradually increased, even up to 10 per cent.

Counter irritants may be applied to the perineum, and cold sitz baths and rectal flushings will prove of great service.

Rectal suppositories containing iodoform, belladonna and ext. ergot are useful adjuvants to the above treatment.

In cases where the organ is enlarged, Belfield recommends porenchymatous injections by means of a long needle (three inches) through the perineum. He employs iodine trichloride, 1-2000 to 1-1000 in distilled water, twenty to thirty minims being distributed daily throughout the gland (W. T. Belfield in Morrow's System of Genito-Urinary and Cutaneous Diseases).

It is a good plan to administer some urinary antiseptic in conjunction with the above treatment, and there is nothing better than a capsule containing boracic acid and salol aa. grs. v., or five grain tablets of urotropin four times daily.

When there is much irritability of the vesicle neck a mixture of potass. bromid and tinc. hyoscyamus will be very effective in relieving the erethism.

In the way of hygienic treatment the patient should abstain, for a time at least, from sexual indulgence, avoid stimulants and stimulating foods, take a reasonable amount of outdoor exercise, and should rigorously abstain from horseback and bicycle riding.

In the lines of general treatment it is advisable to administer strych. nitrate (gr. 1-20) three times a day for its general tonic effect on the muscular and nervous systems, and when neurasthenic symptoms are pronounced forced feeding, baths, massage and electricity are indicated.

RHEUMATIC DYSMENORRHEA.

℞. Am. hydrochlor..... ℥2½
Tr. stramonii..... ℥ ½
Tr. cimicifugæ..... ℥1
Syr. glycyrrhizæ..... ℥2
Tongaline, q.s.ad..... ℥6
M. Sig: Teaspoonful three times a day.

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THE CHEMISTRY OF LIFE.

BY JACOB GLAHN, M.D.,
OWENSBORO, KY.

Fermentation has lately been added as one of the newest conceptions of life.

The public press seems to be considerably interested in these theories, and, of course, these agitations will have a great deal to do with future investigations. But from what I can glean from these articles, it seems to be the modern investigator's business to try to disprove physical law, thereby only bringing out clearer what he intends to hide, or do away with.

As a matter of fact, physical life is a circle. It is a chemical action of resolution in contrast to another chemical action which sets in after physical death has taken place, which latter chemical action is a chemical action of dissolution. Both are physical and philosophical truths.

The animal organism is, from a physical standpoint, if you will pardon the expression, a self-repairing machine. Basic salts, lime, soda, etc.—the molecule thereof, which originally is a gas —has its properties depending upon each other for their evolvement, as dynamic or explosive action, electricity, magnetism, heat, light, motion, etc., and their relation to cell-life is manifest to the student of vital chemistry.

When we once understand that the arterial blood, besides its already generally known functions, also produces a rarefied, typical gas, with the above-stated properties, as the finished end-product of all physiological actions, the unitary (single) basis of life, which composes and feeds all the cells of the organism, and keeps them at par, to use a commercial expression, then will we begin to understand how congestion and inflammation are brought about. They are simply and primarily meteorological phenomena (cloudiness) in vital chemistry, as displayed in physical organisms.

Man cannot create anything *per se*, but he can study the law of life and thereby realize how insignificant a being he really is in nature. He can only simulate physical law. Law is an established order of things to be. It is intelligence systematized.

By affinity, which means attraction, every atom finds its mate, or mates, to form a molecule, which is a gas to start off with.

Water is composed of H_2O, which means two (2) parts of hydrogen and one (1) part of oxygen, each a gas; but jointly make a fluid. But this fluid water is not quiescent. Chemical action goes on. It produces something—a gas. So long as the gas stays in the water, we have fresh *living* water, and just as soon as this gas disappears we have dead, flat-tasting, and eventually foul water.

This same statement holds good of the arterial blood. So long as the blood circulates, and manufactures vital force, a typical gas with the already-mentioned properties, all is well with the physical organism. But let this gas leave the blood and a new chemical action is observed. It begins to coagulate, and eventually to decompose, which can readily be made note of in the operating-room and slaughter-house.

According to physical law, everything started from a nebulous mass—gas. All congenial atoms and molecules rushed together, repelling all others not of the same attraction, and thereby substances and types had their beginning (see "First Principles," by Herbert Spencer), out of this all-pervading gas. It will run through the different stages, according to design, as liquid, semi-liquid, solid and crystalized forms, these forms are all represented in the human organism.

The investigator's work begins with the so-called disorganized molecule. Study its properties which have already been described, and follow its evolution into organized life, always paying due attention to physical law.

Our own intelligence is only a means to observe with, and not to create; because, if it would depend upon our own

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intelligence, within a few moment's time the whole earth would be depopulated, for we all would forget to take a breath at the proper time, and death would surely follow. And with all our intelligence, we would turn physical life from a chemical action of resolution into a chemical action of dissolution.

The Creator knew this would happen from the beginning, and for this reason He put ganglions, which are lumps of gray matter the same as the brain, in connection with the great sympathetic, also called the organic, nervous system, which sends branches to every cell, fiber and muscle of the body, the brain included. And through the instrumentality of these ganglions, also called the brains of the abdominal cavity, he carries on life automatically; so our scientists who would like to do without a Creator, and while looking for a substitute, will not suffocate.

To return to natural law. The very admission of this sentence indicates a guiding intelligence, and cannot be denied, includes all physical knowledge, and is also the key to psychic deductions. System pervades nature with mathematical precision.

All books written contain only glimpses of truths which can be read by students in touch with and in harmony with nature. All wisdom handed down through aeons of time have been gleaned by students of natural phenomena through physical law.

Why a fly will lay its eggs preferably into a fat piece of meat instead of a lean one, has been asked. The question might be asked of the Eskimo and other inhabitants of the frigid regions why they select fat meats and oils in preference to a lighter diet. Simply because fat produces a higher degree of heat, a more active combustion in the organism, to withstand the cold air in a frigid climate.

Equilibrity has to be maintained, and is maintained by means of the sympathetic or organic nervous system.

The same law holds good with the eggs of the fly. Egg cells have intelligence to maintain equilibrity of chemical action in their respective molecules, and since heat is one of the properties of the molecule, the afore-cited explanation as to fat meat is patent.

What is Chemistry? Chemistry is the science which investigates the composition of bodies, and the affinities and properties of the constituent parts.

Now, what is Fermentation? Fermentation is a chemical change in animal and vegetable substances by which new properties are evolved.

Chemistry teaches that according to physical law, bodies, no matter how large or small, are composed, or made up, of something, and if we reduce this something to its least point of reducibility by means of heat, we arrive at and set free the molecule, which is a volatile substance—a gas. Now, as it takes a number of atoms to make a molecule, we can easily perceive that each atom brings its special properties along, and for this reason, some molecules contain more ions (arms) of say electricity, dynamic or explosive action, magnetism, heat, light, motion, etc., or any not-yet-discovered properties of the molecule.

For further enlightment upon the question of molecular evolution, I will again call the reader's attention to Herbert Spencer's "First Principles."

Fermentation is the result of the original chemical composition of plant or animal life. For plant and animal life are finished substances in the scheme of physical law. So fermentation is the product of already especially organized cells in the circle of chemical action of resolution (growth).

Why there should be a chemical action of resolution at all, if it would not be for physical law, is not apparent. All laboratory work is a chemical action of dissolution.

We can perceive then that it is not for man to create typical life *per se*, but only simulate it with such means as are already high in the scale of chemical resolution, in fact, already live.

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The human organism, every cell of it, is made up of basic salts and water, as already indicated. These molecules were originally gas, but we find them in our bodies in the different states of condensation, and by means of the properties of the molecule, which are dynamic or explosive action, electricity, magnetism, heat, light, motion, etc., according to physical law, life is possible.

Whenever students of physical science become so harmonized with physical law as to be able to follow the supposedly disorganized matter into the organized, or, to our perceptions, living cells, then will they begin to see truths, which, if popularized and made practical, will do wonderful good to humanity, and a great many preconceived notions will have to be changed.

By following the phenomena of vital chemistry, and observing cell action in the living organism (still a chemical action) which only can be systematized into type through physical law, we will learn the properties of a cell, its resistent and metabolic powers; and by doing so, we will begin to understand what the normal condition of the physical organization is, which means health on the one hand, and what the abnormal condition is, which means disease.

After these studies have become more notorious, life will be prolonged and lived more satisfactorily. But, according to physical law, a change must eventually set in; when the cells through the slower chemical change in the molecule begin their retroactive movement, and at last the chemical action of resolution, which means life, will stop. Then another chemical change begins, that of dissolution, which means death. But that of dissolution can never start while yet the chemical action of resolution is going on, no matter in what slight degree.

So we have law in nature, a guiding Intelligence with mathematical precision.

A RARE CASE OF SEXUAL PERVERSION.*

BY C. C. GODSHAW, A.B., M.D.,
LOUISVILLE, KY.

When I concluded, after much hesitation, owing to the delicacy of the subject, to read this paper before the Kentucky State Medical Society, I found it was necessary, and not an easy task, to consult many professional brethren and authors and to read much literature on Psychopathia Sexualis.

To my surprise, I was not able to hear or learn of an analogous case nor anything at all similar in character to the one I shall briefly report. This is, indeed, a "rare" case of sexual perversion, and it was only through a surgical accident to the patient that I had my attention directed to this unfortunate human being.

My only apology, therefore, for reporting the history and facts of this case, is, that I hold it to be the duty of every doctor to report his interesting clinical experience, and especially to apprise the medical profession at large of the prevalence of sexual perverts.

On December 10, 1902, I was called to see N. N., about 6:30 p.m., and upon examination with a silver probe detected a foreign body deeply imbedded in the right side of the buttocks. At 7:30 p.m. Dr. Charles Farmer was called into consultation and administered chloroform. We were assisted by Mr. DeWitt Wolf, a senior medical student in Kentucky University. We went prepared to enlarge the original wound, and cut down through the gluteal muscles if necessary, but succeeded, to our surprise, in the following manner in removing a piece of reamer, or brooch, three and five-eighths inches long and firmly imbedded five inches *from the external opening*, which was conical in shape and not larger than the usual surgeon's silver probe. The smallest hæmostatic forceps were forcibly introduced, like

* Read before the Kentucky State Medical Society, at Louisville, April 24, 1903.

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an obstetric forceps, passing the right and then the left blade, after which they were locked upon the piece of metal and quickly withdrawn. The wound was treated antiseptically before and after the operation, and in a few days the patient was up and about attending to his usual avocation.

This foreign body was broken off and remained in this fistulous canal twenty-four hours before surgical aid was summoned. The patient did not seek help on account of pain, but from personal fright, anxiety of his family, and the consequences that might arise if this instrument of *pleasure* was not removed.

The opening of the wound was located near the middle of the buttock and about three inches above the right gluteal fold. The external orifice was about one-half inch in diameter, conical, umbilicated and depressed to the depth of one-quarter of an inch. The marginal surface of the external opening was completely healed, and the only raw and sensitive surface so far as could be ascertained by the examination was the bottom of the fistulous tract, and this is attributable to the slow method of self-infliction.

There is no doubt that the other portion of this fistula, which was five inches in depth, was thoroughly calloused and almost insensitive to pain. The fistula was made by this instrument at the hands of the patient himself and extended in a direction, downward, forward and inward, midway between the tuberosity of the ischium and the rectum, producing a blind external fistula.

There was a similar wound on the left buttock, produced in the same way, but much shallower than on the right side, being only about two inches in depth.

It is remarkable to report that there was no discharge from the wounds, except the one on the right side, from which exuded a few drops of blood, coming, I believe, from the bottom of the fistula, and caused, no doubt, when he pushed this reamer, or brooch, into the canal a little further than he had been accustomed to do, and from the violence used under the intense sexual excitement, causing the same to be broken off during the act.

Naturally, after the removal of this piece of metal, my curiosity and sympathy were aroused, when, upon close, tactful interrogation and much persuasion, I learned the following scientific, interesting history:

Mr. N. N., aged 63 years; nativity, German; occupation, clock repairer; married; has three grown, healthy daughters, two of whom are married, and he is the grandfather of several normal grandchildren. The single daughter is a bright and pretty saleslady and an accomplished pianist. His wife is an aged, healthy, industrious and sensible woman, and is conscious of her husband's weakness, which is a source of grief and worry to her and which she is powerless to control.

The patient is the youngest child, and never knew his parents, being raised by strangers, and when 28 years old emigrated to this country. His father died away from home, when he was but one year old; cause of death, a violent accident or probable suicide.

Age and cause of mother's death are unknown, yet she was delicate and of a nervous temperament. His two sisters were born mutes and died quite young. Has one living brother, an old bachelor, aged 74 years, and was always of a stubborn, peculiar and easily aroused nature.

The patient weighs about 150 pounds, height 5 feet 4 inches, muscular frame, large square shoulders and short limbs, with a peculiar gait. His genital organs are normal. His head and features are unusually large and present a neuropathic appearance. His intellect is above the average and he is very industrious in his habits. He seems otherwise sane and natural and is extremely sensitive when approached about his weakness. He is very devoted to his family, and more particularly to his grandchildren.

For the most part of his married life

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he has had his own bed in his workshop, where frequently during the day and often at night he would mutilate his own person as described to excite his lustful pleasures. He was sexually hyperesthetic from early childhood and practiced masturbation up to his 30th year, and long before puberty.

When quite young he found upon pricking himself with sharp instruments or needles that he suffered no pain and experienced therefrom the most intense sexual pleasure, followed by ejaculation of semen.

He had an aversion for coitus when unmarried, thinking it unclean, and preferred masturbation and the self-infliction of pain by means of sharp instruments to gratify his lustful imagination.

When 30 years old he was married, hoping to quit his vicious habits; found he was not impotent yet from weakness and lack of will power, but could not break himself of this psycho-pathological infirmity, and in the secret of his own room for more than twenty-five years has mutilated his own person.

For many years he has had most violent headaches and suffered from insomnia, and could take with impunity sixty grains of chloral at one dose. He confessed to me a few days past that he continues to follow the same practices with the most satisfactory sexual joy and gratification.

In conclusion, I will add I shall not take up the time of this Society to enter at length into the etiology, pathology or treatment of Psychopathia Sexualis.

We all know that frequently the insane and mentally irresponsible injure and mutilate themselves, even unto death. Then, again, there are many cases from a medico-legal aspect where persons recognized as sane inflict "self-punishment" simply to excite sympathy, practice deception or escape punishment as beggars and criminals, but to torture oneself and suffer pain for lustful and sexual gratification and pleasure stamps the unfortunate human being as a moral degenerate and sexual pervert.

I am satisfied that the medical profession is blissfully ignorant of the great prevalence of cases of Masochism, Sadism, Fetichism, acquired and congenital Homosexuality, Urnings and other phenomena of psychopathic manifestations, and if any member of this Society is interested in the literature of this subject I would suggest that he read Kraft-Ebings (Craddock) on Psycopathic Sexualis, and Whitehouse and Becker's System of Medical Jurisprudence, Howe, Hammond, Casper and a host of other writers.

A PLEA FOR MORE ACCURATE DIAGNOSIS IN DISEASES OF THE UPPER ABDOMEN.*

BY LOUIS FRANK, M.D.,

Professor of Abdominal Surgery and Gynecology in Kentucky University, Medical Department; Surgeon to the City Hospital; Member of Surgical Staff of John N. Norton Memorial Infirmary,

LOUISVILLE, KY.

The advances in surgery in the past decade have been along the lines of treatment rather than those of diagnosis, and along these lines most has been achieved in the treatment of diseases in the lower abdomen than in those involving the pelvic organs and the right iliac region. The impetus given to the surgery of these regions is due the gynecologist, and so great was the success, so brilliant the results and so remunerative the returns that surgery of this region became early a special field. The domain of the pelvic surgeon was rapidly extended, after Fitz's exploitation of the true pathology of appendicitis, to include the right iliac region. In more later years success has also attended the invasion of the upper abdominal zones, though in this progress has been slower, partly on account of the failure of the general practitioner to grasp and appreciate the fact that many of the diseases he has considered

* Read before the Louisville Medico-Chirurgical Society and by invitation before the Bourbon County Medical Society. For discussion see next issue.

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exclusively his own, so far as treatment was concerned, are better treated surgically (a repetition of the discussion in regard to pelvic and appendiceal disease), and partly because diseases in this region are more difficult to diagnose accurately. When in the male the lower abdomen is sick, it is always a safe guess even to say he has appendicitis, but in the upper abdomen we have organs to study whose anatomic relations are such that disease of any one is apt to produce symptoms referable to the other and of such character and intensity that their differentiation becomes at times not only most difficult, but even impossible, without the aid of an exploratory operation.

This is especially true of pancreatic disease, at all times of gall bladder and stomach disease. Usually, however, these same diseases do not present the same diagnostic difficulties early in their history as they do later, after the process has existed for such a time that contiguous structures are implicated. And in proportion to the lessened extent of the disease is the greatest good to be accomplished by surgical intervention.

It behooves us then to study the early symptoms of the diseases of the upper abdomen, and learn to recognize pathological changes here before they have progressed to such an extent that either they involve the adjacent organs, thus increasing the symptom complex, or have reduced the patient to such an extent that proper surgical treatment cannot be applied, even if the diagnosis is made, or, that though the diagnosis may be easily made, as in cancer of the pylorus with tumor and obstruction, no good can be accomplished, no permanent cure promised, even after the most radical procedure, no matter how well borne by the patient.

The field here is so extensive, especially when the lesion is about the region of the lesser omentum, including the pylorus, the head of the pancreas and its duct, the liver and its vessels, the gall bladder and its excretory apparatus, the deodenum, kidney, colon and numerous lymphatics that to attempt to consider more than one or two would give rise to an interminable discussion.

I would therefore limit my remarks to those diseases which I am sure are equally of interest to the general practitioner, and as he sees these cases first, of just as much importance in his field of work from both a diagnostic and therapeutic standpoint as they are to the surgeon.

Gall Bladder Disease.—There is no disease amenable to treatment by the knife which yields such excellent results as disease of this viscus, provided the diagnosis is made early and the patient submitted to operation. Mayo's mortality in 208 cases of uncomplicated diseases was less than 1 per cent. Kehr's, in 204 cases, was less than 2 per cent. And what is true of the work of these men is true of many others. Let us compare this to the results in complicated cases. We find an increase of mortality to 5 per cent. and 4.5 per cent., and this is exclusive of those with cancer. What does this mean? To me the lesson is very plain. Early diagnosis and early operation. Stone in the choledechus tract gives rise in many instances to cancer, for which there is no possible cure. Ninety per cent. of primary cancer of the gall bladder and duct is due to gall stones. You say, "But we do not see these cases, we have very few cases of gall bladder disease." Mayo says, "You do not see them because you do not look for them."

I formerly saw very few myself, but since inquiries have been made of these organs cases have been found which otherwise would never have been suspected. Doubtless many cases are overlooked because we expect jaundice, or if a patient has had jaundice and passed a stone, though he may have future attacks and suffering, it is thought to be colic or something else; for, has he not passed the stone, preceded by jaundice, and is not the passage of stone

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evidence that the gall bladder is empty? Mayo says, and my experience is in accord with this, that he has never failed to find a stone in those cases operated upon after one or more stones had been passed by the bowel.

Again, the most extensive inflammatory changes, even to gangrene, may go on in the gall bladder itself without jaundice, or even without stone formation. I have seen excruciating suffering and invalidism produced by overdistention of the gall bladder.

Upon what symptoms then should we base a diagnosis and be willing to submit our case to operation? In my own experience these patients suffer most from chronic disgestive disturbance. There are frequent attacks of pain coming on within a short time, occasionally, immediately after the ingestion of food. This pain is described as cramp-like and is referred to the epigastric region usually a little to the right of the median line. It is not constant, but more wave-like in character. Frequently vomiting follows and the pain is more or less relieved. I have seen patients who were completely relieved after washing the stomach. As a matter of fact, emptying the stomach usually brings immediate relief. These symptoms persist, at times for years, reducing the patient in flesh not only from suffering, but from starvation. The pain varies in severity, being sometimes very great, and again the patient may go for a week or several weeks without a great deal of discomfort. Dieting improves the condition and lessens the suffering. Liquid diet in small amounts causes little, and at times, no disturbance. Digestants without dieting give no relief. Is it to be wondered that such a train of symptoms as these should be attributed to indigestion or dyspepsia or atony of the stomach or motor insufficiency? The patient presents, as I have stated, no jaundice; bile coloring matter is not found in the urine. The conjunctiva may be slightly tinged with yellow. Examining this patient we find that pressure over the abdomen causes no pain except on a line between the umbilicus and the ninth costal cartilage; here we note some rigidity. There is a tender point half way between the two points above mentioned. Close questioning reveals the fact that the pain which comes on after eating radiates along the border of the ribs on the right side and sometimes towards the right shoulder and arm. The pain occasionally passes across the abdomen and follows the left costal line. There is occasionally temperature following the attacks, and there may have been a chill. No tumor to be felt. Such a symptom complex is almost absolutely indicative of gall stones, and, in my opinion, is sufficient to warrant an operation.

With all due respect to the stomach, I believe it gets credit for too many of the ills to which the flesh is heir, particularly along the lines of imperfectly performed function. That cases of motor insufficiency occur, cases of functional trouble, I do not doubt but my humble opinion is that they are found far more than they really exist. I have seen this so often in cases of gall bladder disease, in appendicitis and other intra-abdominal troubles that I have begun to even doubt the existence as an entity of indigestion, dyspepsia, cramp colic and the like.

"It has been the immemorial custom to look upon dyspepsia as due chiefly, if not solely, to deficiency in the quantity or quality of the gastric juice, to some lack of adequate power in the stomach as a secreting organ. But dyspepsia of the intractable, constantly recurring form is more often a matter of physics than of chemistry."†

The points in diagnosis in gall stones are:

Pain after eating, paroxysmal in character, radiating either towards the left or upon the right side into the back and to the right shoulder with vomiting, followed by relief, and tenderness at Robson's point.

Some of these cases of digestive dis-

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turbances are due, in the absence of gall stones, to gastroptosis, with or without a movable kidney, and in married women most often accompanied by a perineal tear. I see many such cases. Repair of the perineum, with fixation of the kidney, yields strikingly good results.

Gastric Ulcer, Chronic.—Other cases of digestive disturbances may be due to dilatation of the stomach, from an old cicatrix, or contraction and hour-glass stomach as the result of a gastric ulcer, or we may have no dilatation or stenosis, but an ulcer itself present.

In chronic ulcer of the stomach symptoms are frequently obscure and the diagnosis may be not easily made, and unless the patient is put to bed, carefully examined by palpation and analysis of the stomach contents made we will not recognize the condition until hematemesis occurs, or it may go without recognition and the patient die as a result of repeated bleeding or from a perforation which itself may be undiagnosed, or adhesions about the stomach may occur giving rise to a train of symptoms which will persist for years and go unrelieved until the case falls into the hands of some man who appreciates the history of the earlier symptoms.

May I ask you how often are patients who complain of digestive disturbances put to bed and examined completely and carefully? In how many of them is an analysis of stomach contents made? Most men are satisfied with the patient's diagnosis of dyspepsia or indigestion and prescribe lactopeptine, bismuth, or pepsin or caroid, and he come for a few weeks or months, gets tired, and goes to the next doctor and through the same line of treatment. As I have said, a diagnosis of gastric ulcer, or cancer even, is seldom made until blood has been vomited. This should not be, for there are symptoms which certainly indicate ulcer which we should not overlook. Many now believe that cancer of the stomach is in a great measure a preventable disease and Futterer has shown that malignancy is mostly due to long-continued ulceration. He has demonstrated old ulcers which were partly cancerous and shown plainly that chronic ulcer of the stomach leads to carcinoma of that organ. The time to treat cancer of the stomach is in this pre-cancerous stage during the time of ulceration and before the period of malignant engraftment.

"The frequency with which carcinoma will develop in chronic ulcers is now generally acknowledged. Hauser estimated the frequency at 6 per cent., a proportion which seems to be in excess of the truth."†

We know that gastric ulcer is by no means an infrequent disease; Robson estimated that from 5 to 10 per cent. of the community is afflicted with it. In contra-distinction to cancer, it occurs in the second and third decade of life, and more frequently in the female. The diagnosis does not depend upon any one symptom, though the most important is tenderness and pain referred to Brinton's or Cruvielhier's point.

There is no doubt that many patients who have died from supposed malignant disease of the stomach have suffered from nothing but chronic ulceration. The induration which a persisting ulceration may cause is remarkable both for its extent and for its extraordinary mimicry of the appearance of malignant disease.†

"Pain following from a few minutes to several hours after eating is a very constant symptom of gastric ulcer. It is variously described as gnawing, boring, or stinging, and corresponds to a point of tenderness about two inches below and a little to the left of the ensiform appendix. This is the so-called Brinton's point. If the ulcer is in the posterior wall of the stomach, a similar point of tenderness is found a little to the left of the last two dorsal vertebra, and this is known as Cruvielhier's point. Now, these would be pathognomonic were they found only in gastric ulcer, but may be mistaken for cholecystitis. However, nearly always in the latter

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condition we find the pain radiating on a level with the tenth rib to a point at the angle of the right scapula. The pain of gastric ulcer has a further significance in that it marks a relatively advanced progress of the disease. Contrary to the general impression, the greater part of the stomach wall is relatively devoid of sensibility. It is only the parietal peritoneum that has sensory nerves, and ulceration of the gastric mucosa does not cause pain until the irritation incident to it affects the parietal peritoneum or that which lines the under surface of the diaphragm. *Pain pressure is not so much pathognomic of ulcer as that the ulceration is extending and liable to end in perforation.*

Vomiting and nausea are frequently associated with ulcer, but as these conditions are common to functional gastric affections they are in no sense pathognomonic, but of considerable corroboratory value. The same may be said of hyperacidity, which condition is, however, said to occur in 90 per cent. of gastric ulcers.

Periodic attacks of headache is a symptom often complained of, and frequently indeed patients seek aid for the relief of this, when upon close inquiry we find it coincident with the gastric trouble.

There is one other symptom which has been specially emphasized by Futterer, of Chicago, which I think marks a most important advance in the diagnosis of gastric ulcer. This is a persistent hemoglobinemia, and upon it largely, I am convinced, depends the ultimate prognosis of ulcer either from a medical or surgical standpoint. Moreover, the failure to recognize this condition is largely responsible for the subsequent non-healing of gastric ulcer treated by the various methods of rest cure and rectal feeding. These patients constantly show a hemoglobin percentage of from 65 to 25 per cent., and the ultimate prognosis is obvious unless we appreciate the necessity of overcoming this deficiency."*

From the foregoing it will be seen that the percentage of hemoglobin will indicate the progress of the case if treated medicinally, and if this is done our efforts should be not only to give the stomach as much rest as possible, but to bring up the hemoglobin per centage by a proper diet. For this purpose it has been advised to give the juice of beef, which must not be an artificial product, but should be freshly extracted from the actual meat. Should no improvement be shown under this treatment I believe the greatest good, that is, a cure in practically all cases, can be accomplished by a gastro-enterostomy according to the method of Mayo, making the anastomosis at the most dependent part of the stomach.

Inveterate dyspepsia is, in itself, an ample warrant for surgical treatment. Cases are within the experience of all in which prolonged medicinal treatment, most thoroughly and carefully supervised, proves ineffective, or, if temporarily beneficial, is powerless to ward off the recurrence of dyspepsia. In such cases, be the physical signs what they may, an operation is desirable, and abundant justification for it will almost always be found when the stomach comes to be examined.†

There are few beings so abjectly miserable as those who are the victims of intractable dyspepsia. The meal-time, which should be a delight, is a time of despair and foreboding. The keen relish of good food, which the man in physical health should appreciate, is a joy unknown or long forgotten to the dyspeptic. A patient who has misery written in every wrinkle of a thin haggard face, who by reason of long suffering and bitter experience has felt compelled to abandon first one dish and then another, till fluids alone can be taken, and these not always with impunity; a patient, to say the truth, whose life becomes embittered by the pangs of a suffering which he must inflict upon himself, this patient will find, if a gastro-enterostomy be done for the

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chronic ulcer which is the source of all his trouble, that his return to health and appetite is at first almost beyond belief.†

There is no operation in surgery which gives better results, which gives more complete satisfaction both to the patient and to his surgeon, than gastro-enterostomy for chronic ulcer of the stomach.†

"In operating upon chronic ulcer of the stomach always perform gastro-enterostomy. It matters not where the ulcer is placed, a gastro-enterostomy will relieve the symptoms completely and permanently and will permit of the sound healing of the ulcer."†

Perforation should, of course, be treated by immediate surgical intervention.

In conclusion, I would offer the following summary:

(1) That chronic indigestion and dyspepsia *per se* do not exist in nearly the number of cases diagnosed.

(2) That the diseases which give rise to these symptoms are most often of the gall bladder or due to stomach ulceration.

(3) Careful examination and gastric analysis is necessary in all cases complaining of digestive disturbance.

(4) Early diagnosis is essential in gall stones, chronic gastric ulcer and cancer of the stomach as offering the patient the best chance for a complete cure by early operation.

(5) If a strong presumptive diagnosis cannot be made from the symptoms and by exclusion the patient should be subjected to an exploratory operation.

REFERENCES.

†Moynihan, "Surgical Treatment of Gastric and Duodenal Ulcers."

*Stewart, A. F., Clinical Review, Vol. XVIII., No. 4, p. 241.

229 West Chestnut street.

ANTI-RHEUMATIC.

℞. Sol. et. pot. tartrat..... ℥½
Tongaline ..... ℥3

M. Sig: A teaspoonful three times a day.

Society Proceedings.

[Reported by E. A. Forbes.]

THE LOUISVILLE SURGICAL SOCIETY.

Stated Meeting, Monday, September 7, 1903, Dr. S. G. Dabney, President, in the Chair.

EXHIBITION OF PATIENTS.

DR. I. N. BLOOM: About four years ago I exhibited this patient, now 48 years old, before the Society, he having at that time an impermeable stricture. The opportunities for operation at the clinic were such that I advised him to go to the City Hospital for treatment. There were then one or two sinuses in the perineum from which all the urine trickled out; he was operated on by the perineal route by Dr. Bullitt and remained in the hospital about twelve weeks. He has been out of the hospital now for three or four years and passed out of my notice. About July 5 he came to my office on crutches, being extremely feeble, with a temperature of about 103°. Upon examination I found the penis still impermeable and the scrotum swollen; in the penis were one or two sinuses through which the urine was passed, and in the scrotum there were ten or twelve such sinuses. There was a sinus also in the perineum, one on the thigh in front and two on the buttock. No urine at all was passed by the penis. He was simply one mass of pus throughout all this region and was generally in a wretched condition. On the 9th of July he went to the University Hospital and on the 11th I did a suprapubic operation. He did well after this operation and the condition in the perineum diminished to that which now presents itself. The reasons why I did not split up the sinuses will be apparent on inspection. I tried retro-catheterization with the sound, but was unsuccessful. The perineal opening soon healed and drainage has been perfect through the suprapubic opening. I think he is getting along

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very well, for he can now hold his urine for an hour and a half or two hours. The hard rubber suprapubic drainage tube is to be retained permanently. I would call your attention to the condition of the stricture; you will see there is no evidence of a patulous urethra at all.

DISCUSSION.

DR. J. B. BULLITT: I remember this man when he was first presented to the Society, and later on I found him in the ward at the City Hospital. The condition then presenting was an almost imperforate stricture extending the entire length of the urethra. I did then about what Dr. Bloom had concluded was best to be done, a perineal section, draining through the perineum. It was practically impossible to do anything like restoration of the urethra, because there really was no urethra. It might have been better to have done a suprapubic operation at the time. During the time that he was in the hospital he got along very well, and for a year afterward, but then the perineal opening closed up and the trouble recurred. I may say that the perineal section without a guide does not seem so hard as the young surgeon generally supposes. If the incision is made in the median line, you are bound to get into the bladder.

It seems to me that the most interesting question is that of the ultimate fate of this man's organs of generation. They are rather organs of degeneration now, and I think it would be a good plan to get rid of them. He will never be able to get rid of this fibrous tissue. Of course, the splitting up of the sinuses in this case would have been uncalled for.

DR. HORACE H. GRANT: I not only think that it was a good thing that no further attempt was made at perineal section, but even if it had been possible to keep this perineal opening from closing, I think the suprapubic opening is better. It is impossible for a patient with a perineal opening to keep himself clean and prevent excoriation. I have heretofore emphasized my belief that it is better to do a suprapubic operation in such cases. It seems to me that the condition of this man is satisfactory, with the exception, of course, of the condition of his organs, and I believe they will improve when the irritation is removed, especially if these sinuses are split up. While I do not think they will ever be of any use to him, they are likely to give him less trouble and amputation will not be necessary. If they do not improve, then they may be taken away.

DR. I. N. BLOOM: I agree that at that time it was impracticable either to split up the sinuses or to curette. The operation itself was easy and I had no difficulty at all in finding the bladder without a guide. The only thing I noticed particularly was the depth of the pelvis. Dr. Palmer had a case of impermeable stricture at the City Hospital where he operated through the perineum and where the bladder seemed to have vanished; the man's urine trickled out through the perineal wound some hours after the attempt to find the bladder had failed.

In this case I do not know what I will do. If he gets better I will probably split up the sinuses as suggested by Dr. Grant. His penis is of no use to him at all; It has grown larger of late and there is evidently an abscess forming. I have not seen the man before for two weeks, so I will leave the case in *statu quo*.

HEAD INJURY.

DR. AUGUST SCHACHNER: The first specimen is a portion of the occipital bone taken from a little boy 8 years of age, and it illustrates some important features of injuries to the head. This little boy was struck in the back of the head by a brickbat as he was in the act of getting up. This occurred on Monday afternoon. The blow did not stun him at all and he played right along. The family physician saw him on Wednesday on account of the injury to the soft parts,

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which he dressed with boric acid and a bandage. I was called on Friday afternoon; the boy was then septic and irritable, but showed no evidence of cerebral compression at all. My suggestion that the head be explored was acted upon and I cut down and took away a full square inch and some smaller fragments of bone. He made a very good recovery.

It is interesting to note the length of time between the reception of the injury and the symptoms of disturbance; there are hardly any disturbances at all of a cerebral nature at any time. Here was a case of depression of the skull without any compression of the brain at all. The only symptoms were those of a septic nature. About a teaspoonful of the cortex was taken away at the time of the operation.

ENLARGED PROSTATE.

The second specimen is a sequel to the case reported two or three meetings ago, the operation being performed with the assistance of Dr. Abell. The man was about 66 years old, and had been operated upon about eighteen months prior suprapubically for prostatic disturbances. At the suprapubic operation the hemorrhage was simply fierce. The second operation was performed about two months ago, and was done by the perineal route. This part of the gland was taken out, weighing a little over five hundred grains. After about forty-eight hours the man was allowed to sit up in bed, and on the third day was placed in an invalid chair, and at the end of six days was able to stand up and walk about a little. He has made a very good recovery. I examined his bladder two or three weeks ago and found no residual urine.

In this operation more blood was lost than should have been, because I was not as adept as some in controlling the hemorrhage from the corpus spongiosum. The case illustrates the difference between the two operations, and as a general proposition there is no comparison between the two. In point of getting out the mass, in point of drainage, in the rapidity with which the patient got up, and in respect to the additional dangers of hemorrhage and other conditions incident to the age of the patient, there is no comparison. The median incision was made, and the capsule entered from the urethral side; in some of these pieces you can see a portion of the capsule with the gland. While the operation was a little difficult to me, I think it would ordinarily have been considered an easy one. In this case the previous operation made this difference—that you could not make pressure above the pubes because of the scar. That had something to do with not allowing this mass to come out as easily as they ordinarily do. The drainage tube was left in for forty-eight hours and then removed.

In the first instance the man had some perineal enlargement which could be made out with the finger in the rectum. I explored the bladder with my finger during the operation. While performing the operation I floundered around on the outside of the gland, thinking possibly I had gotten into the capsule, when I had not. Then I went in from the urethral side. That illustrates how much easier the operation is if approached from the inside. The whole trick of the operation lies in getting into the capsule, and then, unless it happens to be a very unusual case, it is a very easy matter. The whole of the operation was done in the dark.

DISCUSSION.

Dr. Thomas L. Butler: In regard to the first case, the injury of the head, it emphasizes the fact brought out so often that these head injuries should be explored early, without waiting for symptoms, which we are inclined to do. I want to go on record as saying that when we are called to any apparently serious injury of the head we should cut down upon it and explore.

Dr. Louis Frank: I agree with Dr. Butler. This case illustrates the exten-

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sive damage that may be done to the brain without any apparent symptems. Dr. Vance reported recently two cases, in one of which the entire parietal bone was lost. Two years ago I showed specimens of an extensive injury of the parietal bone with marked depression and laceration of the brain substance, the bone being pressed into the brain without having produced unconsciousness. The patient walked to the infirmary. A number of days later he noticed a slight loss of power in the arm. These cases show that they often result badly when there is apparently no serious injury at the time.

Dr. I. N. Bloom: The second case is of special interest because the operation of prostatectomy is coming into vogue. One's opinion should be held in reserve until after the effects have shown the permanency of the relief. There is a great difference of opinion about it. In spite of the number of successful cases reported by able surgeons, Dr. A. Bodine told me he had operated on five cases with three deaths. At a meeting of the Academy in New York, after a number of surgeons had reported remarkable results, he made this report. After the meeting a number of others said that such had been their experience. The permanency of the cure and return of the function of the bladder will be watched with great interest.

I have two cases in view in which I will probably attempt it. One of the things that interested me was the hemorrhage in the suprapubic operation. I should like to hear from Dr. Schachner on that point. I fail to see how the corpus spongiosum can come in at all, because the whole of the operation is done behind it. There are two operations—one a prostatectomy, in which the incision is made and it is pulled up; the other, which I look upon more favorably, is described by Dr. Senn in a recent number of the *Journal of the American Medical Association.* This is the inverted-Y incision, cutting into the prostate and hooking it up with the finger, pressing the prostatatic portion out. When I do operate I think I shall bear in mind Dr. Bodine's results.

Dr. Horace H. Grant: Two months ago I saw a boy, 4 years old, who had been kicked by a horse, causing a depression of the frontal bone and a compound fracture. The child was not unconscious, and was shortly afterward taken to the infirmary. It was found on examination that there was a depressed fragment of bone, 1 by 1½ inches, which had broken through the dura, and about a teaspoonful of brain matter had escaped. I took five sutures in the dura, passed a drain underneath it and partly closed the scalp wound. He did very well for ten days, and then developed some evidence of infection, like a slight meningitis, from which he recovered in a short time.

Regarding second specimen, it has seemed to me that it is best to expose the prostate as well as possible by a free incision. The incision described by Dr. Senn seems to me to be an excellent plan. In his operation, the first step is to open the urethra, and then he puts his finger into the bladder and uses this leverage in the same manner as the prostatic depressor is employed. Instead of introducing an instrument through the urethra to pull down the prostate, he introduces the finger. He divides the capsule at once and slips the index finger of the disengaged hand into the sheath of the gland, and peels out one lobe at a time. It seems to me the most satisfactory description of the operation for perineal prostatectomy I have seen. Dr. Senn makes the point that if all of the gland cannot be gotten out, enough of it will be removed to give relief to the patient of his disability.

Dr. Irvin Abell: I reported a similar case before this Society the first of the year. At that time the suprapubic sinus done for the relief of the bladder infection, preliminary to a prostatectomy, had not completely healed. This closed up, and the man has been well since, having regained his bladder tone.

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I examined Dr. Schachner's patient before operation and he had four ounces of residual urine with a typically enlarged prostate. Since the operation there has been no residual urine, showing that the operation has relieved the obstruction, which is the principal pathological element in the case.

As to methods of operation, I have had no experience with any, except that of Alexander. I have tried all the others on the dead subject. I found that the prostatic urethra, in the cases I have seen, had been so elongated that it was impossible to get the finger anywhere near the bladder. It is only after the capsule of the gland has been opened, and the mass in part or in whole has been removed, that this can be done.

I also spoke to Dr. Bodine, and he said they usually die about the fifteenth day, apparently with a uremia. He said his fastest time for the operation was one hour, and as these old men usually have kidney trouble, the exposure to an anesthetic for one hour constitutes in itself a great danger. The cases upon which I have operated have all been completed in less than twenty-four minutes.

The difficulty in Dr. Schachner's case was due to the previous suprapubic operation, and I think his hemorrhage was from the wall of the bladder. In the second operation he struck this scar, and had difficulty in pulling out the mass on account of adhesions; on the left side, where there was no such difficulty, it was out in a second.

Dr. John D. Trawick: In regard to the case from which the occipital fragment was removed, there are two points involved—early and careful examination of the traumatism, and early operation to relieve the condition. I should say that in the hospital where I have been doing work we had no staff and my colleague was not a surgeon. I was called away for thirty-six hours and on my return found a patient suffering from a wound over the right orbit. He had fallen against the fly-wheel of an engine, with the usual results. I found edema, some depression, and the usual symptoms of compression. I operated at once and found a triangular piece of bone impinging on the frontal lobe. The dura was severely injured and part of the brain protruded. With the complete removal of all of the detached bone fragments and careful technique and checking of the hemorrhage, I was distressed to see patient sink rapidly and die at the expiration of fourteen hours. I report this case briefly and rather incompletely that I may stress two points urged by the doctor, feeling sure that had I been able to operate on entrance of patient into hospital there need not have been a fatal termination.

Dr. August Schachner: Dr. Bloom expressed surprise at the hemorrhage in the suprapubic operation. That was the first prostatectomy I had done. I looked up the matter and found that it was one peculiarity of the suprapubic route.

Dr. I. N. Bloom: I understand that it was in the opening of the bladder that the hemorrhage occurred.

Dr. August Schachner: I believe I lost more blood in the perineal operation than I had any right to lose. When I got into the corpus spongiosum I thought it an error, but after looking up the matter I found it was a usual thing. It was unusual to strike the membranous portion and go right in. It was here that I lost the most of my time in the beginning of the operation. I might add that the whole trick is getting into the capsule, and I think this can be done more easily from the urethral side than from the external side. I got clear outside of the capsule, but when I went in from the inside I had no trouble at all.

All of this was done absolutely in the dark with the finger. I believe we should try to expose the field of the operation, but it will be difficult to do so. If an extensive dissection is made much valuable time is lost. In all of these bladders the urine is more or less

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septic and the wound will get in an ugly condition. I saw Dr. Senn's description of the operation and I do not feel able to criticise him, but I would leave it open so as to get drainage. I should not think you could get union if you did sew it up. The idea is to do the operation as quickly as possible and get as complete drainage as possible. This man was a very good subject, and in spite of that the whole of the wound became necrotic on the surface. There was ammoniacal decomposition of the urine and necrosis resulted. I should not think that a very extensive operation would be a very wise one. I do not see how you could suture any of these wounds, as infection is almost inevitable. A prostatectomy is hardly successful that does not admit of digital exploration of the bladder.

The essay of the evening was read by Dr. James Vance, his title being "Salpingitis." (See page 165.)

DISCUSSION.

DR. AUGUST SCHACHNER: I think several operators have pointed out the fact that there is a period of apparent immunity shortly after an acute attack of septic inflammatory trouble about the uterus, and the patient can take care of a good deal of infection about this time. I mention this point as bearing on the time of operation. I agree that it should not be done hurriedly, and it should not be delayed too long, on account of the formation of adhesions. I think it is better to go in above, unless there happens to be a considerable collection of pus. The operation should be done under the guidance of the eye. As to drainage, I think the indication for its use is a large denuded surface with oozing. I do not think the escape of pus is an indication. If we clean out the abdominal cavity, I think the chances are better if we do not drain. I think a recent article by Dr. Clark proved that. We cannot drain the peritoneal cavity away.

DR. LOUIS FRANK: Touching the pathology, I think we should draw a sharp distinction between salpingitis and pyosalpinx. I think there is a great difference, not only in the manner of infection, but also in the conditions presenting at the time of operation. My experience has been that pyosalpinx is not as bad as true salpingitis before the conversion of the tube into a pus sac. In cases of pyosalpinx, the infection is through the uterus itself, and the abscess is formed not so much by the adhesions as by the fimbriated end of the tube becoming glued to the large gut or by the swelling of the mucosa, and not of the peritoneum causing an inversion of the mucosa, thus sealing the tube and forming an abscess in this way. In many of these cases the pus soon becomes sterile. The bad cases I have met with have been those where there were still some active organisms in the walls of the tubes themselves.

I believe there are some cases where we should operate by the vaginal route, but I do not believe this should be confined to cases where we puncture only for the escape of pus alone, but it should be extended to cases of infection of the uterus. Especially in the case of child-bearing women, probably the operation from below is the better one. In other cases it might be better done from above.

As to the ligature, I use both catgut and silk, and I do not see that there is any danger in the use of catgut. It is mere cowardice on my part that prevents me from using it more, and I think that is the reason why it is not more generally used. I believe we would like it better if we used it oftener.

In operating I think we should take the worst side first and then get rid of the other side. I drain from above, and I believe this is necessary in only the fewest number of cases. I use the so called cigarette drain when it is neces sary, removing it in twenty-four hours, closing the wound above in three lay

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ers. I do not agree with Dr. Schachner that all cases will do better without drainage. I recall cases where I believe they would have been saved if we had drained. I do not believe the drain would have been of service so much in getting rid of the septic material as in carrying off the serum and thus getting rid of the pubulum upon which the bacteria might feed. I do not believe that filling up the abdomen with salt water will obviate the drain.

Dr. J. B. Bullitt: The paper is of great interest and touches upon a great many points. I want to speak first as to the sterility of pus that has been present five or more weeks. There is no question but that many of these abscesses are sterile, and yet there is one feature that leads me to suppose that while the pus itself may be sterile, there are other neighborhoods in the same pelvis containing organisms that are still active. We see women with recurrent attacks after years have elapsed, with pain, temperature and other symptoms. These women have gone through their period of five weeks and may have had pus resulting. The tube has been sealed off at both extremities, and not been invaded by further organisms from the uterine side. Whence, then, the subsequent attacks with the same symptoms? I would like to be informed on this subject. In case a woman has had a salpingitis lasting more than five weeks, it does not necessarily follow that she is free from infectious organisms.

One attack renders the patient more susceptible to a second attack, just as is the case with gonorrhea in the male. The individual is still susceptible. The patient I have in mind has had recurrences, and has never fully recovered.

As to the time of the operation, the essayist said that it should always be done late. I believe that is very questionable. That may be true in most cases, where the inflammation is seen at its height. Pryor and other writers have argued that many of these cases can be nipped in the bud by opening the cul-de-sac and draining the pelvis. He states with great positiveness that in many of these women, if taken at the time when the curve is still upward, the process can be cut short by drainage. If this can be done, it is a matter of the greatest importance, as the woman can be saved valuable organs.

In regard to the technique of these operations, I take it that all of them are good. Those who use silk think it is a good material to use, and the same with catgut. The best surgeons I have seen operate have used catgut, and if it is anchored through tissue there is very little danger in it. Where we suspect that some infection has been left behind, I think catgut is the best.

The trend of general opinion as to drainage is that it seldom does good, and then in the class specified by Dr. Schachner. We cannot get the infection out of the abdominal cavity by any drainage, and a certain amount of mechanical damage is done by the drain. While we would do it with fear and trembling, I believe that more and more we will come to close up the abdomen without drainage.

Dr. Horace H. Grant: As to the character of operation in such cases, I think it is always wise where collections of pus can be made out to let them out through the vagina before operative steps through the abdomen are undertaken. Of course, in many cases of disease of the tubes the pus even if present cannot be reached by the vagina. Where it can be readily demonstrated, an incision through the cul-de-sac and drainage will enable the patient to get better, if not well, and diminishes dangers of operation, should one be necessary later on.

I have found the greatest danger where there were extensive and organized adhesions of the intestines to the other viscera, and the mortality I have met with has been through damage to the intestines in separating these adhesions, where the intestines have been torn or where imperfect repair has resulted. I have learned to treat this

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much more than sepsis. Most fecal fistulæ terminate fatally.

As to drainage, there are extensive adhesions to be separated; drainage is through the vagina by vaginal puncture. Where there has been extensive traumatism, a step of this kind adds greatly to the security of the patient.

Dr. James Vance: In regard to Dr. Schachner's remarks about drainage, I do not believe that it ever does any harm when it is properly done. It is done very often when it is not needed, but it is not harmful when it is put in. When it looks suspicious or there is any uncertainty about the pus, I think it is better to drain. Dr. Bullitt's point is well taken, that no drain will carry off the bacteria, but it does carry away all the serum which collects in the abdominal cavity and the cul-de-sac and thus remove the food supply for bacterial growth. The peritoneum will take care of the bacteria very readily if this is done.

As to Dr. Frank's remarks as to the distinction between pyosalpinx and salpingitis, every case of pyosalpinx is a salpingitis. It is a later stage of the inflammation. Pyo-salpinx is the last stage, and when this is reached there is is nothing further except pyemia and death.

As to catgut, I have seen it used by a great many operators abroad with excellent results; I have also seen two cases bleed to death. I believe it is a good thing where the pedicle is small and there is no difficulty in constricting the tissues, but it does not stand tension well; and whenever the pedicle is enormously large and thick I believe it is dangerous to use it. I am willing to admit that if we can get a good grade of catgut that will stand the tension, it will be all right. Ligation of the vessels separately would increase the safety of the patient, but the trouble in those cases is that the oozing is so great. I have seen one case die from oozing after being tied with silk. Catgut would give rise to more accidents.

Dr. Frank objects to freeing both sides before tying off either. I think it is better to begin upon the worst side and free that first. We very often have to tie that off to control the hemorrhage. Where it can be done I think it is best to free both sides.

Dr. Bullitt asks from whence we have the recurring attacks of salpingitis where there has been no second exposure. I think that is because the bacteria at certain times do not seem to make any headway, and then, for some reason, these bacteria in the lymph sinuses and deep epithelium start up a fresh growth. It is probably due to a lessened amount of resistance of these cells. Nothing is absolutely known on this subject. It is analogous to the gonorrheal recurrences in the male. The gonococci in the deep cells start up a new infection, just why, it is hard to say. It may be possible that their lying dormant is due to sporation, at which time their resistance to destruction by the tissues is enormous. They do no injury *per se*, but when their surroundings are good for growth, they form new colonies.

I think Dr. Bullitt's suggestion as to Pryor's method of drainage is worthy of trial; very often our best discoveries have been without any apparent logical basis; just as hot applications to the abdomen and thorough purgation will often cut short an attack of salpingitis, this vaginal drainage of the cul-de-sac may by counter-irritation effect a cure.

As to Dr. Grant's method of drainage through the cul-de-sac, I think he is perfectly right, if the patient shows temperature and is weak; and always where there is accessible pus.

The L. & N. will run a special sleeper to Memphis meeting of Mississippi Valley Medical Association, October 5th.

Write Editors of Louisville Monthly Journal of Medicine and Surgery for particulars.

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THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Friday, June 26, 1903, Dr. Ben Carlos Frazier in the Chair.

COMPOUND COMMINUTED FRACTURE OF CRANIUM.

DR. AP M. VANCE: Eight days ago to-night this little boy was struck by a street-car. The needle-bar struck him on the right side of the head, making a compound, comminuted fracture. Less than an hour later I removed these fragments of bone. There was a tremendous depression in the brain and two of the fragments had been driven down into the dura. Here is a piece that lay over the lateral sinus, which you see is very thin. The remarkable feature of the case was that he was never unconscious and walked immediately afterward. He got up yesterday and has been walking around and is now about well.

Some years ago I showed before this Society another specimen, which I have brought along to-night. It was also taken away by a car. That boy lived thirteen days, and might have been alive yet had it not been for the foolish interference of his father. He also walked after the injury and was never unconscious. The piece is the whole parietal bone from right side.

HEREDITARY FRIEDRICH'S ATAXIA.

DR. BEN CARLOS FRAZIER: This boy comes before you with a history as follows: He was a healthy baby; walked at 1 year of age. Nothing abnormal noticed for a couple of years. When he was probably 4 years of age his mother noticed that he fell more frequently than she thought he ought in walking around and playing about. Between the ages of 4 and 5 he had a fall, striking his forehead against a stone (fell off a porch), the wound suppurating. The doctor thought the outer table of the skull was fractured. Following this injury he had what was called bilious fever, lasting ten days or two weeks, and after that time had to learn to walk again, it taking him several weeks to walk as well as before this injury. At about 9 years of age he had an attack of measles and was quite sick for a week or ten days, part of the time delirious. After this attack it was some time before he could walk again. At 11 years of age he had an attack of typhoid fever; was in bed probably six weeks; temperature ran rather a low course; no complications. After his convalescence he was several months learning to walk again; he was able to sit in a chair, but could not walk.

Patient's father died of consumption about a year ago. Grandparents on paternal side both died of kidney disease rather early in life. Grandfather on maternal side died of heart disease at 56. Mother's mother still living, but in bad health, having some stomach trouble. Patient's mother had one sister, who was epileptic and died at about the age of 30, probably with typhoid. Patient's father and mother were second cousins. His mother is an intelligent-looking woman, tall and very good form and physique; she is rather dark. She is a very level-headed woman, rather phlegmatic in temperament. The boy has never had a convulsion, and his mother does not think his attacks have grown very much worse. He goes around in the town in which he lives, though he falls down very often. He cannot stand up with his eyes closed, and the patellar reflex is practically abolished. His sight is practically normal. His mother wanted me to be very plain with her and tell her if anything could be done for him, as she could not afford to spend money on him if it was not worth while. I told her I would see what could be done. I think it is a case of hereditary ataxia, but I have not looked up the literature much. I would like to have a full discussion of the case and get the opinion of the members as to what hopes can be held out to the mother.

DISCUSSION.

DR. AP M. VANCE: I do not know just what is the matter with the boy,

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but I have an idea that it is akin to the pseudo-hypertrophic paralysis. He has many of the signs, and I believe it is progressing. I would make my diagnosis from the hardness and the over-development of the glutei muscles. I do not know what has gone before, and they may be undergoing degeneration.

DR. J. B. MARVIN: From the slight examination I have made, I think Dr. Frazier is correct; I think it is a case of Frederich's ataxia, the boy has the characteristic facies, attitude and gait. I think the development of the muscles of the buttock is due to the fact that he has had poor use of his legs. I do not think it a case of pseudo-hypertrophic paralysis. The prognosis of this disease is absolutely unfavorable, and I think Dr. Frazier had better send him home.

DR. H. A. COTTELL: I agree with Drs. Frazier and Marvin. The case belongs to the class of atrophies of the posterior sensory neurons, whether located in the spical column or in the cerebellum is a question. I rather think it is cerebellar atrophy.

DR. JOHN J. MOREN: I came here tonight believing that Dr. Frazier's case was one of hysteria, but I give up to hereditary ataxia. The inco-ordination of the extremities along with the other signs make it a clear case of hereditary ataxia, spine type.

PERNICIOUS ANEMIA.

DR. J. B. MARVIN: The first case I will report occurred in a lady about 45 years old, the widow of an army officer. The family fell into my hands as a legacy from the late Dr. Hewett. Three years ago she developed anemia. She had been a very handsome woman, and when she became quite pale her appearance disturbed her. She had worried about a mother whom she had lost and a sister who had died with a typical case of interstitial nephritis. She has another sister who has a typical case of myxedema; sent her East, but she returned very anemic. She had been on arsenic and developed a purplish discoloration about the eye, but I think the arsenic had nothing to do with it. For quite a while she had had a very irritable intestinal tract. Her appetite increased, but after some slight imprudence little blisters would develop on the sides of the tongue, which always looked smooth and frequently had red streaks on it. She had passed through the climacteric, but at long intervals she still menstruated. She called my attention at that time to the discharges from the bowels, which were large, brownish, very liquid, sometime bloody; this she thought had some connection with her menstruation. She refused an examination of the vaginal tract.

The case went on, with persistent anemia, irritation of the alimentary tract, without stomach involvement; periodically, sometimes a month or three months apart, would be an absence of these discharges from the bowels. Other troubles came on—the loss of another sister and a dangerous wound to her son, a soldier in the Philippines; the last year she ran down very rapidly. The anemia was marked; the face was a pale lemon color and there was puffiness about the eyes. There was no edema of the ankles or albumin in the urine. The trouble with the bowel continued. The physician in the East made a diagnosis of cirrhosis of the liver. On her return she apparently improved some, but after a few months she had considerable hemorrhages from the bowels, with some clots. I was unable to make out any evidence of cirrhosis of the liver; there was no ascites or diminution of the liver or anything abnormal. She had piles, but declined operation or examination, except over the bowel.

The anemia persisted, and every vital and physical function failed, except her capacity for worrying and brightness of intellect. During the early part of last year she had quite a large hemorrhage, and sent for me in great alarm, thinking she had passed a piece of her liver. She took the idea that she could not

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drink milk, and dieted herself very strictly. There was some improvement about the bowel and lengthening of the period between the hemorrhages, but she grew progressively weaker. I made frequent examinations of the liver, and suggested other examinations, which were declined. I had great difficulty in getting out a drop of blood from the finger for microscopic examination, even after manipulating it for quite a while; it was so waxy. I got two drops, but she would never let me make another attempt.

On the first of March she went to bed; up to that time she had been dragging herself about. She never left the bed after that, and she was one of the most disagreeable patients I ever had. She brought before the doctor and the nurse all the scenes attending the death of her mother and her sisters, including the undertakers' visits, and so on. She seemed to gloat over the horrible scenes she had witnessed or heard of. I finally got her consent for consultation, and Dr. Vance made a rectal and vaginal examination. She had taken a notion that she had cancer of the womb, but nothing of the kind was revealed and there was no mass in the abdomen. She began to develop nervous phenomena, with peculiar, temporary loss of power, peculiar nervous symptoms about the heart and head, hysterical, perhaps. She never got out of bed, and died about the middle of May. An autopsy was refused. She died in a coma, which lasted for two or three days.

She had recurring discolorations about the eyes, but no other spots. Was this, or was it not, a case of progressive pernicious anemia? The hemoglobin was diminished, with considerable diminution of the red cells, which were irregular in size and shape. There were a number of small ones and a fair proportion of large ones, and this fits into the description of the blood changes in pernicious anemia, which means a diminution of red cells with changes in their size and shape and also a diminution of the hemoglobin. I think this case would fit in pretty well with the description given by the authorities. It lasted a little longer, was a little slower in its progress, and had apparent periods of marking time and improvement. There were no febrile attacks until the last six months, when there was also a diminution in the quantity of urine and it was of a deeper color.

I had at the same time two other cases, both women, one about the same age, one married, both with piles, both with all the clinical symptoms of pernicious anemia, but the other two have greatly improved and are still living. The married woman was operated upon and the piles removed and she has apparently recovered. The other is a great deal better and is at present away from the city. Last summer her blood was examined by Ewing, of New York, who confirmed my diagnosis. In that a case of pernicious anemia or some other disease presenting all the symptoms of that disorder without being the disease itself? Is progressive pernicious anemia a distinct clinical entity or simply a clinical condition?

DISCUSSION.

Dr. Ap M. Vance: I examined this woman and the examination was negative. There was no evidence of ulceration or of recent bleeding. I was unable to locate any rectal disease by palpation. I think the diagnosis was correct.

Dr. J. G. Cecil: I think Dr. Marvin's diagnosis of pernicious anemia is that which would have been generally accepted, but I do not know what that means. It does not seem to me to be a disease, but rather a condition depending upon some other disease. I have seen several cases which have resulted fatally and some I have seen recover, but I have not been able to see that the whole condition is in the blood. I have always had an idea that there was something else underlying it.

Dr. Louis Frank: I do not see why we should not have pernicious anemia

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in the blood analagous to conditions in other structures. The trouble is that we look upon the blood as something peculiarly different. It really should be looked upon as a tissue in which the red cells are analagous to the parenchyma of the tissue itself, and we may have an atrophic condition of these cells as well as in other organs.

Dr. J. B. Marvin: The old condition of pernicious anemia meant a progressive anemia that was not dependent upon hemorrhage, diarrhea, malignancy or disease of the lung or kidneys. The diagnosis was made negatively. As I understand the most recent definition, it is essentially a specific disease dependent upon the action of some poison which generally enters through the alimentary canal and destroys the red cell, causing a large, peculiar deposit of iron in the cells of the liver. I believe we should go further. If to that you add the rapid formation of blood cells, you have a good definition. The imperfect production of new cells is a feature of the disease. The microscopic examination of the blood cells is very striking. This condition is distinguished by a progression towards a fatal termination, yet I have two cases whose symptoms correspond exactly with these, both of whom are improving.

THE AMERICAN PROTOLOGIC SOCIETY.

The fifth annual meeting of the American Protologic Society held its sessions in the St. Charles Hotel, New Orleans, May 5 and 6, 1903.

After the transaction of preliminary business, President Earle delivered a very able address on "The Qualifications for Membership in the American Protologic Society." Among other things, he said:

"Now is the time that our foundation is being laid, and the life and success of the Association depend upon the wisdom and discretion with which it is laid. We should look well to how our ship of state is trimmed and manned for each year's voyage, and have our course well mapped out to avoid the possible rocks and quicksands. And just at this time and juncture it seems to me that our attention should be called to a matter of the gravest importance to the continued life and usefulness of our Association, if it is to be the oracle of thought, purpose and action in all that pertains to protologic work. The profession, and especially general surgery, is looking ascance upon us, and is already prophesying that no great good can be accomplished in such a restricted field, and were work to be done is so near the surface, and within reach of the simplest observer. It is certainly expected that if we are to be recognized as leaders in this line of work, we must use as our foundation the cardinal principles that underlie both general surgery and medicin; in other words, we must be well grounded in the principles of both. In the organization of any association it is almost impossible to draw the lines very tight; but when fairly upon its feet, there is nothing more importhat to its perpetuity and usefulness than the character and ability of the members it gathers in, and upon whom the position to be taken by the Association depends. We cannot scan too closely, or from too many standpoints, those whom we delegate to carry on this work, and on whom its future success depends. It is quality, not numbers, that we most need; neither the one whose usefulness in proctologic work is interfered with by his interest in other departments of medicine or surgery, nor the pseudo-proctologist, should apply for membership in this Association. The principle object the members of this Association have had in keeping it a separate and distinct organization from the American Medical Association, has been that we might control the character of its membership, not from any selfish or narrow motives, as is evidenced by the welcome we have always accorded to those who are not

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members, to attend our general meetings, but for the broad and worthy object of enrolling upon our list of members only men of ability, learning, and with the avowed purpose of bending all their energies to advancing their knowledge of rectal medicine and surgery; because it is only by such means and men that we can hope to maintain our position as leaders and directors in this special line of work. Candidates for admission to the American Proctologic Association should be specialists in that line of work, meaning thereby, that they devote their energies chiefly to it. I do not mean to say that we may not often get valuable suggestions from those in other lines of work, just as general medicine and surgery do from kindred sciences. If men in the various specialties of medicine would only be sufficiently honest and unselfish as to confine themselves strictly to their special work, there would be no necessity for the suggestions that I am now making. We would have no such applicants. Show me a gynecologist or general surgeon who would hesitate for one moment to take a case of rectal surgery. I do not mean to say that our work is so complicated that others than rectal surgeons cannot perform such operations. A general surgeon can perform iridectomy, but who would be so foolhardy as to go to a general surgeon for such an operation when a competent oculist is at hand? So it is in ours, and in all other specialties; the man who confines himself to one line of work must be far below mediocrity if he cannot perform the operations in his line better than the general surgeon or those in other special lines of work. In order to be recognized by this organization, one should be something more than a mere itinerant vender of a pile ointment, or a pile doctor whose only armamentarium consists of a hypodermic syringe and a bottle of carbolic acid. We need well educated, well trained and well equipped men to carry on this work. We have submitted to us operations that require the most perfect surgical technique and the greatest skill, the coolest head and deftest hand."

The papers presented at this meeting were of unusual interest. Dr. J. Rawson Pennington presented a paper on "X-Ray Therapy in Ano-Rectal Diseases." The author dwelt upon the importance and efficiency of this agent in the treatment of pruritis ani, where the cause is local. The Society asked Dr. Pennington to continue his searches in X-ray therapy in rectal diseases.

Dr. L. H. Adler, of Philadelphia, presented a paper, entitled "Tubercular Ulceration of the Rectum and Anus," in which he stated that tuberculosis is now recognized as the cause of a number of conditions occurring about the anus and within the rectum, the pathology of which was formerly obscure. The disease may be a primary process, but in the majority of instances it is secondary to similar changes in other organs. It may involve any portion of the rectum, or the skin about the same; its most frequent site, in the author's experience, however, is at the muco-cutaneous junction. The affection is always due to the tubercle bacillus. Any plan of treatment, to be of benefit, must, in a large measure, be directed to the general constitutional condition; and for this purpose, pure air, forced feeding, and all the hygienic and medicinal measures should be adopted as are employed in general tuberculosis. The local treatment has for its main objects the destruction of the tubercle bacilli, and the establishment of a healthy reparative process. The Paquelin or the galvanocautery, chemical caustics, such as chloride of zinc, nitric acid and acid nitrate of mercury, the curette, and the X-ray, have been employed for these purposes, and with varying results.

Dr. Leon Straus, of St. Louis, presented a very interesting paper on "Primary Tuberculosis of the Rectum, with Report of Cases."

"Atony of the Rectum and Anal Sphincters; Its Etiology, Pathology,

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Diagnosis and Treatment," was the title of a paper presented by Dr. Wm. Bodenhamer, of New York, in which he said:

"Atony of the rectum and colon is most commonly met with in delicate women of a lax muscular fiber, and in those whose sedentary occupations lead to a neglect of the necessary measures to insure the regularity of the functions of the organ. It is also frequently met with in delicate children. In the treatment of rectal atony, the first consideration is to enjoin a strict observance of regular habits respecting a daily evacuation of the rectum, and this may be aided and often attained by simple means, such as the injection of half a pint of cold water into the rectum at the regular time of going to stool, cold being tonic, stimulant, and astringent, and acts somewhat similarly to nux vomica, by exciting the sensibility and contractility of the organ; but it should be discontinued as soon as the object of its use has been attained. In the more obstinate cases, however, the chief remedies should be nux vomica, alone or combined with some other ingredients, together with the employment of rectal injections composed of powerful astringents and tonic substances, with the intention of inducing contraction, corrugation and condensation of the relaxed and weak muscular fibres of the rectum, by which they become shorter and firmer, and thus aid in diminishing the morbid organ to its normal dimensions and tone.

Dr. John L. Jelks, of Memphis, Tenn., read a paper, entitled "Obstipation, its Causes, Effects, Diagnosis and Treatment." He stated: "Obstipation is the term used by proctologists to denote mechanical obstruction of the bowel, and is preferred to the generic term of which obstipation is one variety." He classed the causative factors as follows:

First—Extravisceral.
Second—Perivisceral.
Third—Visceral.
Fourth—Intravisceral.

One of the chief facts which the author wished to forcibly express is that other factors may and do cause obstipation or obstructive constipation, and a careful discrimination should be made before an operation is performed upon a supposed obstructing rectal valve.

Dr. B. Merrill Ricketts, of Cincinnati, called the attention of the Society to "Cautero-Angiotribe" as an efficient agent in the treatment of hemorrhoids and first degree rectal prolapse.

This subject, together with that of "Hemorrhoids," by Dr. George J. Cooke, of Indianapolis, elicited considerable discussion, and Dr. Ricketts was instructed to make further report on the use of the angiotribe in the treatment of hemorrhoids. The discussion disclosed the approval of various methods of treatment of hemorrhoids, but none of them ideal.

"The Treatment of Anal and Rectal Diseases Without General Anesthesia," was the title of a paper by Dr. Wm. L. Dickinson, of Saginaw, Mich., in which he said:

"The treatment of anal and rectal diseases has been so long associated with that of general anesthesia that when a patient presents himself, and we have made an examination, we unconsciously begin to solve the mental problem of how he will take the anesthetic, and the number of days he will be confined to the house after the operation. The time-honored treatment of anal fissure by dilation, under chloroform, was both effective and speedy; but we can accomplish the same results, in a little longer time, by the use of cocaine or eucaine. Superficial fistula, ischio-rectal abscess, external hemorrhoids, and many cases of internal hemorrhoids, can be operated upon under filtration just as well as general anasthesia. We owe it to our patients, and also to ourselves, to keep patients from going to the irregular practitioner, for as regular, educated physicians, we ought to be able to cope with all diseases of the rectum in an intelligent manner, and thus give entire satisfac-

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tion to our patients. Our students should be taught that the greatest number of our patients seek our advice and aid for ailments that respond readily to office treatment that can be given without general anesthesia.

Probably the most interesting paper of the meeting was that of a report on "A Unique Case: Molluscum Fibrosum of the Rectum in a Patient, the Subject of the Typical Skin Lesion," by Dr. A. Bennett Cooke, of Nashville. He stated:

"The feature of the case which justifies the adjective 'unique' is not the skin diseases nor the occurrence of the multiple fibroid tumors in the rectum, but rather the association of the two conditions in the same individual, and the further fact that the mucous and cutaneous tumors are identical in structure. He described the patient as emaciated, sallow, nervous and despondent; at least a dozen calls to the stool in twenty-four hours; sphincters relaxed and peri-anal integument excoriated from the irritating discharges; anal canal patulous, in spite of numerous successive abrasions. The proctoscope revealed the rectum almost completely filled with polypoid tumors, many of them ulcerated and bathed in a muco-purulent blood-stained secretion of exceedingly offensive odor. The growths began in the lowest rectal chamber, varying in size from a bird shot to an almond; the largest were uniformly pedunculated; those intermediate in size had sesile attachments, and the smallest appeared as mere elevations under the mucous membrane, well bedded. It was found that the lesions extended well into the sigmoid colon, smaller in size, and were attended by less inflammation of the mucosa. Beginning below, the tumors were removed by torsion with the forceps, and by biting them off with a curette against the sharp end of the proctoscope. The hemorrhoid was rather free, so that it was possible to remove only a small number at a sitting. The operation was repeated from time to time during a period of three weeks, when the bowel, as high as could be seen, was clear of all but the smallest tumors. Sixty of the growths were removed; no anesthetic was employed."

Dr. Cook appended a report from the pathologist, which demonstrated the identity of the skin and rectal lesions. The production was considered a valuable contribution to proctologic literature.

The Society elected the following officers for the ensuing year:

President—Dr. William M. Beach, of Pittsburg.

Vice President—Dr. Leon Strauss, of St. Louis.

Secretary-Treasurer—Dr. A. Bennett Cooke, of Nashville.

Executive Council—Dr. Samuel T. Earle, of Baltimore (retiring President), Chairman; Dr. George B. Evans, Dayton, O., and Dr. John L. Jelks, Memphis, Tenn..

The Society adjourned to meet in Atlantic City in June, 1904, on the first and second days of the meeting of the American Medical Association.

PROGRAM.

Twenty-ninth Annual Meeting, Memphis, Tenn., Mississippi Valley Medical Association. October 7, 8, 9, 1903.

PAPERS.

MEDICAL SECTION, PEABODY HOTEL.

FIRST DAY, WEDNESDAY, OCTOBER 7.

MORNING SESSION, 10 O'CLOCK.

1. The Importance of Medical Organization in Securing and Enforcing Medical Laws. By T. J. Happel, Trenton, Tenn.
2. Medical Organization. By. J. N. McCormack, Bowling Green, Ky.
3. Medical Legislation Governing Practice. By George Stemen, Denver, Col.
4. Specialism in Its Modern Significance. By Albert B. Hale, Chicago, Ill.
5. Acne Vulgaris; Its Successful Management and Therapy. By M. L. Heidingsfeld, Cincinnati, O.
6. Digitalis. By W. Francis Waugh, Chicago, Ill.
7. The Local Lesions and Treatment of Amebic Dysentery. By J. P. Tuttle, New York, N. Y.

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AFTERNOON SESSION, 2 O'CLOCK.

8. What a General Practitioner Should Do in the Early Stages of Mental Disease. By Brooks F. Beebe, Cincinnati, O.
9. The Early Diagnosis of Mental Disease. By C. B. Burr, Flint, Mich.
10. Masked Forms of Epilepsy. By W. B. Fletcher, Indianapolis, Ind.
11. Paresis. By Hugh M. Lash, Indianapolis, Ind.
12. Infantile Paralysis: Its Nature and Treatment. By Albert E. Sterne, Indianapolis, Ind.
13. Tendon Transplantation in the Treatment of Infantile Spinal Paralysis. By Alex. C. Wiener, Chicago, Ill.
14. Discussion of the Neurologic Aspect of Dr. Wiener's Paper. By Harold L. Moyer, Chicago, Ill.

EVENING SESSION, 8 O'CLOCK.

15. Medical Malingering and Its Detection, with the Report of a Case. By John Punton, Kansas City, Mo.
16. Neurasthenia. By Wm. Charles White, Indianapolis, Ind.
17. The Therapeutic Value of Heat and Cold Applied to the Spinal Cord. By W. Frank Glenn, Nashville, Tenn.
18. Some Recent Investigations Upon the Action and Therapeutic Value of Currents of High Potential and Frequency. By Curran Pope, Louisville, Ky. Discussion, led by Hugh T. Patrick, Chicago, Ill.
19. Auto-Intoxications Seen in General Practice. By T. D. Crothers, Hartford, Ct.
20. Leukemia; Exhibition of Patient. By Wm. Britt Burns, Memphis, Tenn.
21. The Continued Fevers of the South. By Wm. A. Evans, Chicago, Ill.

SECOND DAY, THURSDAY, OCTOBER 8.

MORNING SESSION, 10 O'CLOCK.

22. The Hypodermatic Use of Mercury in Syphilis. By S. P. Collings, Hot Springs, Ark.
23. How to Care for the Mouths of Syphilitics. By C. Travis Drennen, Hot Springs, Ark.
24. Syphilitic Manifestations in the Nose and Pharynx. By Paul Turner Vaughan, Hot Springs, Ark.
25. Eclampsia. By Louis Burckhardt, Indianapolis, Ind.
26. Summary of Recent Investigations by the Author into the Cause and Treatment of Diabetes. By A. C. Crofton, Chicago, Ill.
27. The Treatment of Puerperal Infection. By J. Clarence Webster, Chicago, Ill.
28. Treatment of Typhoid Fever with Castor Oil. By C. C. Bass, Columbia, Miss.

AFTERNOON SESSION, 2 O'CLOCK.

29. Neurosees of the Stomach and Intestines. By Frank P. Norbury, Jacksonville, Ill.
30. Brain Strain Dyspepsia. By C. H. Hughes, St. Louis, Mo.
31. Constipation; Its Causes, Significance and Treatment. By G. W. McCaskey, Fort Wayne, Ind.
32. The Indications for Treatment of Dilatation of the Stomach. By Fenton B. Turck, Chicago, Ill.
33. Dilatation of the Stomach. By Gustav Futterer, Chicago, Ill.
34. Etiology, Pathology and Treatment of Cancer. By Wm. F. Barclay, Pittsburg, Pa.
35. Scarlet Fever; Its History, Symptoms, Duration, Incubation and Variation in Type. By John M. Batten, Downingtown, Pa.

THIRD DAY, FRIDAY, OCTOBER 9.

MORNING SESSION, 10 O'CLOCK.

36. Twenty Years' Observation of Chronic Interstitial Nephritis. By Charles S. Bond, Richmond, Ind.
37. Chronic Interstitial Nephritis. By R. A. Bate, Louisville, Ky.
38. Cyclic Albuminuria. By Arthur R. Elliott, Chicago, Ill.
39. The Use and Abuse of Fresh Air and Over Feeding in Tuberculosis. By W. H. Prioleau, Asheville, N. C.
40. The Question of Tuberculosis in General practice. By Paul Paquin, Asheville, N. C.
41. State Control of Tuberculosis. By John M. Hurty, Indianapolis, Ind. Discussion opened by Charles L. Minor, Asheville, N. C.
42. Uterine Hemorrhage Following Abortion. By Lee A. Stone, Louisville, Ky.

SURGICAL SECTION, GAYOSO HOTEL.

FIRST DAY, WEDNESDAY, OCTOBER 7.

MORNING SESSION, 10 O'CLOCK.

1. Why the General Practitioner Should Understand the Technic of Mirror Sight. By Allen DeVilbiss, Toledo, O.
2. The Relation of Ophthalmologists and Otologists to the General Hospital. By Frank Allport, Chicago, Ill.
3. Intra-ocular Sarcoma. By A. G. Sinclair, Memphis, Tenn.
4. Acute Otitis Media: Causes, Symptoms and Treatment, Medical and Surgical. By Geo. Knapp, Vincennes, Ind.
5. The Treatment of Chronic Otitis Media. By J. F. Barnhill, Indianapolis, Ind. Discussion led by Dudley S. Reynolds, Louisville, Ky.
6. Some Surgery of the Ethmoid and Sphenoid Cells. By A. D. Murphey, Cincinnati, O.
7. Naso-Pharyngeal Adenoids. By J. A. Stucky, Lexington, Ky.

AFTERNOON SESSION, 2 O'CLOCK.

8. Cancer of the Cervix: Its Prophylaxis and Treatment. By Floyd W. McRae, Atlanta, Ga.
9. The Perfected Surgical Treatment of Fibroid Tumors of the Uterus. By L. S. McMurtry, Louisville, Ky.
10. A New Treatment of Dysmenorrhea. By Emil Ries, Chicago, Ill.

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11. Backward Displacements of the Uterus. By Matthew C. McGannon, Nashville, Tenn.
12. Conditions in Female Patients Simulating Appendicitis. By R. Stansbury Sutton, Pittsburg, Pa.
13. Inflammatory Pelvic Diseases of Women. By F. Henrotin, Chicago, Ill.
14. Tuberculosis of the Female Genitalia and Peritoneum. By J. B. Murphy, Chicago, Ill.
15. The Value of Referred Pain in the Diagnosis of Surgical Diseases of the Abdomen. By Geo. W. Crile, Cleveland, O.

EVENING SESSION, 8 O'CLOCK.

16. Typhoid Perforation, Diagnosis and Treatment. By Louis Frank, Louisville, Ky.
17. Extra Uterine Pregnancy Diagnosis and Treatment. By A. H. Cordier, Kansas City, Mo.
17. Ectopic Gestation, Report of a Case with Complications. By Anderson Watkins, Little Rock, Ark.
19. The Surgery of Pulmonary Gangrene. By L. L. McArthur, Chicago, Ill.
20. Sublamine as an Antiseptic for the Hands. By A. Goldspohn, Chicago, Ill.
21. Surgery of the Thyroid Illustrated by 100 Stereopticon Slides with Report of Cases. By B. Merrill Ricketts, Cincinnati, O.

SECOND DAY, THURSDAY, OCTOBER 8.

MORNING SESSION, 10 O'CLOCK.

22. The Causes for the Occasional Failure of Operation to Cure Gallstone Disease. By Wm. J. Mayo, Rochester, Minn.
23. The Diagnosis and Operation for Gallstones. By W. D. Haggard, Nashville, Tenn.
24. Prophylaxis of Tetanus. By S. C. Stanton, Chicago, Ill.
25. Indications and Technic of Prostatectomy. By G. Frank Lydston, Chicago, Ill.
26. Use of the Catheter in Prostatic Hypertrophy. By Wm. N. Wishard, Indianapolis, Ind.
27. Varicose Ulcers of the Leg. By Robert Corothers, Cincinnati, O.
28. The Pathology and Treatment of Gangrene in the Lower Extremities. By H. J. Whitacre, Cincinnati, O.
29. Accidents of Railway Surgery. By Francis D. Kendall, Columbia, S. C.
30. Some Everyday Surgery. By Alex. R. Craig, Columbia, O.

AFTERNOON SESSION, 2 O'CLOCK.

31. The Present Status of Stomach Surgery. By A. J. Ochsner, Chicago, Ill.
32. The Treatment of Benign Stomach Lesions by Surgical Interference, with Report of Five Cases. By A. C. Bernays, St. Louis, Mo.
33. Diverticula of the Esophagus. By A. E. Halstead, Chicago, Ill.
34. The Significance of Paralysis of the Bowel and Its Management. By Geo. S. Brown, Birmingham, Ala.
35. Penetrating and Perforating Gunshot and Stab Wounds of the Abdomen. By John Young Brown, St. Louis, Mo.
36. Changes in the Gullet Wall Following the Destructive Action of Escharotics. By Joseph Rilus Eastman, Indianapolis, Ind.
37. Tubercular Joints and Their Treatment. By D. C. Peyton, Jeffersonville, Ind.
38. The Roentgen-Rays in the Treatment of Tuberculosis of the Joints. By J. Rudis-Jicinsky, Grand Rapids, Ia.

THIRD DAY, FRIDAY, OCTOBER 9.

MORNING SESSION, 10 O'CLOCK.

39. The Treatment of Compound Fractures, Immediate and Remote. By Frederick A. Besley, Chicago, Ill.
40. The X-Ray in Fractures. By Duncan Eve, Nashville, Tenn.
41. How Far Shall We Rely on X-Rays in Carcinoma of the Breast? By Wm. Allen Pusey, Chicago, Ill.
42. X-Ray Burns: Cause, Prevention and Treatment. By M. O. Shivers, Greenville, Miss.
43. Presentation of an Operative Cystoscope, with Report of Cases. By Bransford Lewis, St. Louis, Mo.
44. Fractures of the Spine. By Carl E. Black, Jacksonville, Ill.
45. Pathologic Migration of Vertebræ. By H. R. Allen, Indianapolis, Ind.
46. Drainage in Surgery. By J. Lively Johnson, Louisville, Ky.

Current Literature.

Birchett, W. G., Owenton, Ky.: Uterine Curettage.—(*Medical Times.*)

The following indications for this operation are given:

1. As a diagnostic agent in uterine hemorrhage, profuse leucorrhea, intrauterine growths and degenerations. 2. Uterine fungosites. 3. Undeveloped uterus. 4. Procidentia. 5. Incomplete abortion and septicemia. 6. Lacerations of the cervix. 7. Carcinoma of the uterus. 8. Uterine fibroids. 9. Endometritis atrophic, hypermetrophic, septic, specific, where dysmenorrhea and leucorrhea are prominent symptoms. 10. Sterility. 11. Chronic cervical endometritis. 12. As a preliminary measure in operations of more importance and magnitude.

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Louisville Monthly Journal

OF MEDICINE AND SURGERY.

"Alis Volat Propriis."

VOL. 10. LOUISVILLE, OCTOBER, 1906. NO. 5

EDITORIAL STAFF.

JOS. M. MATHEWS, M.D., LL.D.
A. M. CARTLEDGE, M.D.
H. HORACE GRANT, A.M., M.D., BUSINESS EDITOR.
HENRY ENOS TULEY, A.B., M.D., ACTING EDITOR.

FOURTH OF JULY TETANUS.

The profession has long been aware of the dangers incident to misdirected patriotism on the Fourth of July, but they can hardly have been prepared for the appalling list of casualties published in the August 29 issue of the *Journal of the American Medical Association.* These elaborate tables, prepared by Dr. S. C. .Stanton, of the editorial staff, show a total of 415 cases of tetanus, almost all of them due to injuries received from the blank cartridge. Kentucky furnishes but four of these and Pennsylvania 82, probably to be accounted for in a measure because Kentuckians, as a rule, don't have time for *blank* cartridges. The City Council of Louisville has recently passed an ordinance making it unlawful to sell blank cartridges and toy pistols, but, as the *Journal* points out, a number of cities have this law, but it is not enforced at all.

The *Journal* article concludes that the duration and incubation of the Fourth of July tetanus is short, the mortality of reported cases being 95 per cent. After careful consideration of the question of the source from which the tetanus bacilli come, the conclusion is reached that they are not present in the cartridges, but that these wounds are received at a time of year when tetanus bacilli are most prevalent, the subject's hands are usually dirty, and blank cartridge wounds offer ideal conditions for the development of tetanus.

As a matter of education in preventive medicine, as relates particularly to this evil, the *Journal* suggests that the scourge might be stopped by an appeal to the manufacturer of the blank cartridge and of the toy pistol; the stopping of their sale in all cities and towns, and prosecution of offenders who permit their sale in violation of the law; education of the parent, and last, but not least, more thorough treatment of the wounds at the time of the accident, and the *early* use of antitoxin as a prophylactic agent.

This work of the *Journal* is of the greatest service, and cannot be too highly commended. It will undoubtedly accomplish much good.

MEMPHIS.

Memphis, "The Hub of the South," will entertain the twenty-ninth annual meeting of the Mississippi Valley Medical Association, October 7, 8, 9, in that elaborate and hospitable style which has always characterized it as a convention city. On another page will be found the program, which is replete with excellent topics by the foremost physicians and surgeons in the Valley, insuring, from a scientific standpoint, a most successful session. This Association for the past eight or ten years has stood for all that is best in the science and art of medicine, and has attracted to its meetings as essayists,

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orators, members and visitors the foremost lights in the profession, not only of the Valley, but of the whole country.

It is proposed at this meeting to vote upon the new Constitution provided for at the last meeting in Kansas City, which will make the Association a District Branch of the American Medical Association, with the same requirements for admission to membership as in that organization. This will be a decided step in advance, and by recognition of the President of the Valley Association as a Vice President of the American Medical Association the unity will be thorough and complete.

The selection of the orators by the President, Dr. Edwin Walker, of Evansville, has met with universal commendation, viz., Dr. Robert H. Babcock, of Chicago, in medicine, and Dr. Ap Morgan Cartledge, of Louisville, in surgery.

The profession of the Valley is cordially invited to attend.

Notes.

The following action was taken by the "National Dental Association" at the recent meeting held at Asheville, N. C.:

"*Resolved*, That it is the sense of the 'National Dental Association' that each medical college in the United States should include in its curriculum a lectureship on 'Oral Hygiene, Prophylaxis, and Dental Pathology.'"

The dental profession feels that with the introduction of the teaching of oral hygiene in the public schools, which they are striving to accomplish, and the co-operation of medical men who have been specially instructed on this subject, a great stride will have been made toward the prevention of caries of the teeth, not to mention many other good results to the general system, which would surely follow a better care of the oral cavity.

The *American Journal of Orthopedic Surgery* is the title of a publication just received. It is the official publication of the American Orthopedic Association, the Editorial Committee being Drs. R. W. Lovett, of Boston; B. E. Mackenzie, of Toronto, and Harry M. Sherman, of San Francisco. It will be published quarterly at $5 per annum.

The first number contains ten original articles, a list of officers and members of the Association, and seventy-two references to literature of orthopedic surgery.

Dr. G. Frank Lydston will shortly publish a book on sociology, entitled "The Social Diseases," embracing the crime question, the social evil, etc.

The many friends of Dr. A. W. Brayton, of Indianapolis, the able editor of the *Indiana Medical Journal*, will be pleased to learn of his convalescence from a celiotomy performed for an abdominal abscess which followed a fall from a moving street-car August 12. His son, Dr. Nelson D. Brayton, assumed editorial charge of the *Journal* during his father's illness.

Health Report. — Health Officer Allen has just submitted his annual report for the fiscal year ending August 31 to the Board of Safety. Among the diseases credited with the most deaths are the following:

Tuberculosis, 449; heart disease, 329; pneumonia, 293; inanition, 184; diphtheria, 121; typhoid fever, 157; Bright's disease, 181; enterocolitis, 145, and meningitis, 101.

Considerable space is devoted to the question of diphtheria, the death rate from which was 6.8 %. Type of the

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disease was much more virulent than in previous years. Prior to 1898 there were no records of contagious and infectious diseases. In 1898-9, with 189 cases, the mortality rate was 1.37; 1899-1900, 160 cases, with a death rate of 1.62; 1900-1, 317 cases, with a death rate 16:22; 1901-2, 844 cases, with a death rate of 1.30; 1902-3, 834 cases, with a death rate of 6.8.

Dr. Allen commends the city for its action in distributing free antitoxin to those children whose parents are unable to purchase it.

PREWITT.—Dr. Nelson B. Prewitt, of Winchester, succumbed to appendicitis on the morning of September 1. Dr. Prewitt was operated upon on the 30th of August, but the operation was performed too late. He was 32 years of age, and had been practicing in Winchester for about eight years. He graduated from the University of Virginia. He was a member of the Clark County, Kentucky Valley and Kentucky State Medical Societies. He is survived by a wife and one child.

AUTOPSY.—Considerable interest has been aroused by the autopsy ordered by the insurance companies upon the body of the late Paul Caine, who was drowned in the Ohio river several weeks ago. Drs. S. E. Woody, B. F. Barbour, G. W. Griffiths and H. L. Hunt are in charge of the investigation for the insurance companies; Drs. Goodman, H. A. Cottell and Harris Kelly for the Caine family. Strychnia was suspected to have been taken by the deceased prior to his going into the water for a swim; and it is on these suspicions that the examination has been ordered.

FREDERICK JOHN LOCKE, M.D., Dean of the Cincinnati Medical Institute, died September 11, 1903, at his home in Newport, Ky., after a short illness, aged 74 years. He was born in the city of London, England, on the 7th of December, 1829, educated at Christ's College in the same city, and read medicine with Dr. Edwards, of London. He emigrated to America at the age of 17, was Lieutenant Colonel of the Thirty-third Ohio Volunteer Infantry. He graduated at the Eclectic Medical Institute of Cincinnati in 1864, and has practiced medicine in Newport since that year; was Professor of Materia Medica and Therapeutics in the above institution for the past thirty-two years.

TAYLOR.—Dr. P. R. Taylor, Dean of the Hospital College of Medicine, has recently recovered from a serious attack of ptomaine poisoning, resulting from eating a ham sandwich during the heated term. He was quite ill for several days, but his recovery seems now assured.

SINCE the catalogue of the Louisville Medical College was issued and mailed the Kentucky State Board of Health has adopted certain rules and regulations as to fees, etc., to which all medical schools must conform. In conformity to these regulations the fees of the Louisville Medical College will not be less than $55 to any student for the session of 1903–1904.

BATH HOUSES.—Health Officer Allen, in his annual report, shows a total of 20,217 free baths having been taken since the establishment of the city bath houses in August, 1902. The Mayor and Health Officer will ask the General Council to appropriate money to supply additional houses in other parts of the city.

County Societies.

Regular monthly meeting Bourbon County Medical Society, Friday, September 11, at 3:30 p.m., Paris Council chamber. Papers: "Puerperal Eclampsia and Albuminuria Treatment," by Dr. McWord; "Diet in Typhoid," by Dr. J. W. Ferguson.

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OHIO VALLEY MEDICAL ASSOCIATION.—The regular meeting of this Association will be held at Evansville, Ind., November 12–13, 1903, under the Presidency of Dr. B. L. W. Floyd, of Evansville. Dr. A. J. Lieber, of Henderson, is Secretary, and Dr. A. M. Hayden, of Evansville, Chairman of the Arrangements Committee.

Carlisle County Medical Society met in Milburn, at 10 a.m., with Vice President E. B. Willingham in the chair. The following interesting papers were read: R. R. Hocker, M.D., Dysentery; W. Z. Jackson, M.D., Medical Ethics; W. L. Mosby, M.D., Sprains; J. R. Owen, Cerebro-Spinal Meningitis. The various members present showed their appreciation of the papers by thoroughly discussing the subject matter of each. The attendance was good.

The Society was most hospitably entertained by the Milburn doctors and their friends.

The next meeting will be in Bardwell, the first Tuesday in December.

Every practicing physician in the county is a member of our Society.

Book Reviews.

The Principles of Obstetrics. A Practical Manual for the Student and General Practitioner.

By Stanley Perkins Warren, M.D., Portland, Me., Obstetric Surgeon to the Maine General Hospital; Consulting Physician to the Maine Eye and Ear Infirmary, etc., etc. Octavo; 385 pages; superbly illustrated by 165 line and half-tone engravings. Cloth; $3.00 net. Leather; $3.75 net. New York. 1903. William Wood & Co.

The general scope of this book is to be commended, as it strikes a happy medium between the quiz compend style book and the more elaborate treatises. The anatomy of the pelvis is considered in sufficient detail.

Part I. considers Menstruation, Ovulation and Conception. In embryology the old terms *epiblast*, *hypoblast* and *mesoblast* are used, instead of those more generally accepted, ectoderm, entoderm and mesoderm. Too little attention and too few illustrations are used in this section, especially in description of the fetal membranes. For the student this chapter is inadequate.

The symptoms of pregnancy are accurately and fully described, dividing, according to Hirst, the period of pregnancy into the first, second and third trimester.

Part IV. The mechanism of labor is thorough, describing the powers, the passages and the passenger.

It is difficult to know just where to draw the line in curtailing the description of a subject in order to bring the matter within the scope of a work of this size, but Dr. Warren has succeeded very well. As a guide to a student it will serve its purpose, but as a reference book it is not full enough.

Gynecology. A Text-book for Students and a Guide for Practitioners.

By Wm. R. Pryor, M.D., Professor of Gynecology in the New York Polyclinic Medical School; Attending Gynecologist New York Polyclinic Hospital, etc., etc. Cloth, $3.00. One hundred and sixty-three illustrations. New York and London. D. Appleton & Co. 1903.

The writer has endeavored to present a book describing those diseases peculiar to women and their treatment, and in this he has succeeded admirably. It is presented in a rather original manner, describing in the first part the diseases, and it the latter the operations are given. In other words, there has been nothing superfluous given, nothing but what strictly belongs to gynecology.

Examination of the patient occupies the first chapter, then are considered the Inflammations, Distortions and Displacements; with Lacerations; Diseases of the Vulva, Vagina, Cervix, Urethra and Bladder; Fistulæ, Tumors (but unfortunately spelled *tumours*); Ectopic Gestation; Cancers; and in the latter portion of the book the operations, their technic, aftercare of patient, etc. Tonsillitis is spelled with one "l."

Too much cannot be said in commendation of the excellent illustrations throughout the book.

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King's Manual of Obstetrics.

By A. F. A. King, M.D., Professor of Obstetrics and Diseases of Women, in the Medical Department of the Columbian University, Washington, D. C., and in the Medical Department of the University of Vermont. Ninth edition, revised and enlarged. In one 12mo. volume of 628 pages, with 275 illustrations. Cloth, 2.50 net. Lea Brothers & Co., Publishers, Philadelphia and New York. 1903.

Nine editions of a text-book bespeaks its popularity. This book is deservedly popular—for it supplies the student with a groundwork which is easily built upon by class work, recitations and lectures.

In this edition some errors have been corrected and obsolete methods of practice omitted. The chapter on Puerperal Septicemia has been remodeled and, for the most part, rewritten.

It is one of the most valuable books of its kind we have had the pleasure of reviewing, and its popularity is sure to continue.

Diseases of the Ear. A Text-book for Practitioners and Students of Medicine.

By Edward Bradford Dench, Ph.B., M.D., Professor of Otology in the University and Bellevue Hospital Medical College; Aural Surgeon to the New York Eye and Ear Infirmary, etc. Third Edition. Nine colored plates, and 170 illustrations in the text. $5.00, Cloth. New York. D. Appleton & Co. 1903.

Since 1894, when the first edition of this work was issued, so many developments have occurred in otological surgery as to necessitate its rewriting, and in this new third edition all the major operations in this department of surgery are considered in detail. This is especially true of the operative treatment of chronic suppurative otitis media, and the intra-cranial complications of this trouble.

The chapter devoted to the anatomy and physiology of the ear is very complete—the illustrations clear, and very helpful. In fact, the illustrations throughout are valuable in themselves. The author has laid special stress in all cases to the treatment of the various diseases encountered, both operative and otherwise.

The publishers are to be congratulated in adopting the American spelling of color, instead of colour, as in other books issued by them. No expense has been spared in the publication.

A Thesaurus of Medical Words and Phrases.

By Wilfred M. Barton, M.D., Assistant to Professor of Materia Medica and Therapeutics, and Lecturer on Pharmacy, Georgetown University, Washington, D. C.; and Walter A. Wells, M.D., Demonstrator of Laryngology and Rhinology, Georgetown University, Washington, D. C. Handsome octavo of 534 pages. Philadelphia, New York, London. W. B. Saunders & Co. 1903. Flexible leather, $2.50 net; with thumb index, $3.00 net.

This book should at once find a place on the book shelves and on the library table of busy medical writers, as it supplies as no other book does the meaning of medical words and phrases, rather supplying the word when the meaning or idea is in the mind.

The term Thesaurus may appall some, but it is a name used in general literature for a book which thus supplies the word for an idea, and was used by Roget in his "Thesaurus of English Words and Phrases." In the latter book no cross references or definitions are given as in the work before us, making a lexicon or dictionary essential when it is used. The definitions precede the terms by way of identification and are arranged alphabetically.

The Thesaurus may be used successfully to find a word to fit a definite idea or to supply words which may be vaguely thought of.

The book will be of use to the busy medical editor also, as it will be found of assistance in interpreting the expressed thoughts of others. The synonyms given will be found of the greatest value.

The work is highly original, and the authors deserve great credit for its thoroughness in almost every detail.

The Practical Medicine Series of Year-Books.

Pediatrics by Isaac A. Abt, M.D., Assistant Professor of Pediatrics, Rush Medical Department, and **Orthopedic Surgery** by John Redlon, A.M., M.D., Professor of Orthopedic Surgery, Northwestern Medical School, Chicago. 1903. The Year-Book Publishers, Chicago.

In this volume, as in others of this valuable series, can be found references to and comments upon all that is latest in these specialties.

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LOUISVILLE MONTHLY JOURNAL

OF MEDICINE AND SURGERY.

VOLUME 10. LOUISVILLE, NOVEMBER, 1903. NUMBER 6.

Original Communications.

GASTRIC CARCINOMA.

BY BEN CARLOS FRAZIER, M.D.,

LOUISVILLE, KY.

I only want to read a brief paper on gastric carcinoma, more to report some cases that I have recently seen than to go into any long dissertation on a subject that unfortunately so little is known and one where remedial measures are of so little avail.

Cancer seems to be on the increase, the stomach being the seat of almost half of the malignant growths. Cancer of the stomach is a primary disease in a large proportion of cases. The percentage of cancer varies very much according to the geographical location.

Age is a very important factor in diagnosis. Briton collected 600 cases and the average age at death was 50 years. Lebert gives in his table: "Under 30 years, 1 per cent.; 30 to 40, 17.6 per cent.; 40 to 60, 60.7 per cent.; 60 to 70, 16.3 per cent.; above 70, 4.4 per cent."

"Welch's statistics of 2,075 cases of gastric cancer show the following distribution for the different ages: 10–20, 2; 20–30, 55; 30–40, 271; 40–50, 499; 50–60, 620; 60–70, 428; 70–80, 140."

So according to the above figures the greatest liability to cancer of the stomach is between the 40th and 60th year. There are two cases on record where the disease was congenital. There seems to be rather more males than females attacked with cancer of stomach; probably this can be explained by men being more liable to trauma and eating coarser food, a greater variety, and at a greater variety of places. It also may be partly accounted for by the fact that men are more often patients in hospitals where statistics can be kept than women, and in reality the proportion may not be any greater.

It is extremely hard, I think, to say whether heredity plays any part, as it is is not an unusual thing to find cancer of the stomach or of some other organs in almost any family. Many of the cases that are counted as hereditary may be only incidental. I will pass the question of origin of cancer by saying, nothing definite yet has been given the profession, though the parasitic theory is perhaps getting closer to the true cause than any other that has been offered. More than half the cases of cancer of the stomach reported have the seat of origin at the pyloric end, the cardiac end and greater and lesser curvature taking the remainder, probably 40 per cent. Metatistic changes have not been found to be so frequent in gastric carcinoma as cancer of some other organs, although the liver and mesenteric glands are frequently secondarily involved, as well as the spleen and pancreas. Mesenteric glands and nodular liver have even been noticed before any malignant disease of the stomach had been suspected. Symptoms are so varied, and as there is no pathognomonic symptom, it is frequently very hard, indeed, to make a diagnosis until the later stages, when any one could make a diagnosis, and when

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no one could be of any permanent assistance.

Since Billroth first undertook, and did, a successful gastro-enterostomy there has been some very heroic and brilliant surgery done in the upper abdominal region, as noted by Dr. Frank in his paper at our last meeting. But with our lack of knowledge on the subject, there can but few cases be diagnosed early enough to warrant so grave an operation, unless we are continually on the outlook, and examine every stomach and its contents that is presented with any digestive symptoms whatsoever, loss of flesh or any other symptoms that are constitutional.

Even in this day of most brilliant surgery, I do not think it at all advisable to do a laparotomy for diagnosis of gastric cancer. With a tumor present in the epigastric region, history of loss of flesh, poor appetite, bad digestion, age about 50, some vomiting, especially in the morning or on taking food, some trouble with the bowels, constipation or spell of diarrhea, one could easily diagnose gastric carcinoma without any analysis of the stomach contents. The diagnosis of gastric cancer depends on a great deal, and without all of the most affirmative symptoms it is very hard indeed to say a person has cancer. Our diagnosis will have to depend on history, physical examination and analysis of the stomach contents, of test meals, or even in the morning after fasting all night. It would not be if there was obstruction at the pylorus. Of course motor insufficiency from other causes might be present, and there might be present a residue from the evening meal taken the night before. Perhaps the most troublesome diagnosis without a tumor would be between cancer and ulcer of the stomach. As a rule in ulcer of the stomach the tongue is not coated, and there is a small spot painful to pressure and some connection with digestion, copious hemorrhages not recurring frequently, pain being absent when the stomach is empty or no digestion going on. On the other hand, in cancer, as a rule, the tongue is thickly coated, pain over the whole gastric area and sometimes radiating over a large part of the abdomen. Pain not depending on digestive period so much as in ulcer. Anorexia present, hemorrhage small and recurring often. Where tumors are present we have to differentiate between those of stomach and some other organ; if of the stomach, whether it be benign or malignant. There are very few benign tumors of stomach, still fibroma, myoma and even lipoma have been reported. They are of such rare occurrence that one can hardly be mistaken for the other. Where there is no tumor the diagnosis is more difficult and chronic gastritis, ulcer, neurasthenic gastritis, and achylia gastrica have to be excluded.

The diagnosis of gastric cancer where there is no tumor will have to be made entirely from the contents of the stomach, and there are several conditions where it is very hard to make a diagnosis where you have complete analysis made. The absence of HCl. and the presence of lactic acid is as a rule thought to be enough evidence to make out a diagnosis of cancer of the stomach. Boaz was the first to lay great stress on the presence of lactic acid in stomach contents as being almost pathognomonic. The absence of HCl. in cancer of the stomach was discussed by Von der Velden in 1879, although Ewald mentioned that an English physician had experimentally touched on the subject in 1824. Perhaps HCl. is absent in a greater number of cases than lactic acid is present, at least cases of a decade or two ago would have shown this, if not of the last few years. The presence of lactic acid is more sought for now than formerly. Boaz accords pathognomonic value to its presence. Einhorn states in his article on "Cancer of Stomach," that Klemperer, Thayer and Rosenheim have reported cases where lactic acid was present where there was no malignancy of the stomach.

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Einhorn states, "The diagnosis of cancer can be positively made under the following conditions:

"If particles of tumor are found (in the wash-water or in the sound) which under the microscope reveal the characteristic picture of a malignant growth.

"The presence of a more or less large tumor with an uneven surface belonging to the stomach and associated with dyspeptic symptoms.

"The presence of a tumor associated with frequent hematemesis.

"Constant pains, frequent vomiting, ischochymia, emaciation, all these symptoms being quite permanent and not extending over too long a period of time (six months to one year).

"Tumor and ischochymia.

"Emaciation, ischochymia, presence of lactic acid.

"Constant anorexia and pain, not yielding to treatment, accompanied by frequent small hemorrhages (of coffee-ground color)."

It would only be that one had the satisfaction of a diagnosis, it being too late to do any good.

Personally I have had no experience in the blood changes in malignant disease of the stomach, but I find quite a diversity of opinion among various authors, several claiming that the red cells and hemoglobin are both largely reduced and others that it is not so as a rule.

Cabot states that frequently not until the late cachectic stage is there any marked diminution in the red cells or in the per cent. of the hemoglobin. In seventy cases the average number was 4,090,000 and the average of 70 per cent. hemoglobin. He also states that sometimes the red blood cells are in excess of normal, one case reporting over 6,000,000 red blood cells.

V. Jez reports in the Year Book of Medicine and Surgery eight cases of cancer and three of ulcer of the stomach, from which he reaches the conclusion that in cancer the red cells are more distinctly reduced than in ulcer, and there is practically always a leucocytosis in cancer. Leucocytosis, however, also occurs in ulcer. He thinks, however, that the most important point is in nucleated red corpuscles, which practically never occur in ulcer, while there are usually some in advanced cancer. No one of these points is of great value alone, but considered together he thinks they are an aid in diagnosis.

F. Henry, in the Year Book, states that he has never seen a case of gastric cancer with a blood count with 1,500,000, nor a fatal case of pernicious anemia with blood count greater than 1,000,000.

Hayem states, in Practical Medicine series, that "when we are unable to obtain any physical signs of cancer of the stomach, there are a number of symptoms obtainable from a study of the blood. If the latter exhibits no giant and nucleated forms of red corpuscles, nor any leucocytosis, we may exclude the presence of pernicious anemia. Tentacular and pseudo-parasitic forms of red corpuscles with abundant hematoblasts point to cancer. Marked anemia without an anemic murmur suggests cancer. Several authors diagnose latent stomach cancer when the so-called digestion leucocytosis is absent, and when no chlorhydric acid can be recovered from the stomach."

All these signs are untrustworthy, and the diagnostic symptoms have to be minimized. Our diagnosis at last rests on clinical symptoms, history and microscopical and chemical analysis. At last, when we have made a diagnosis, what is to be done? If there is a very early diagnosis, and the patient is in real good physical condition, perhaps it is worth while to operate, whether it be curative or palliative.

Mayo, speaking of cancer, says that in something over one hundred cases of gastric cancer which he examined with a view to operation, over one-half were beyond intervention. It was only in the cases where the location of the growth introduced mechanical features could diagnosis be made early enough to attempt radical cure. He also states

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one of the most pronounced symptoms is diminished muscular power of the stomach, and if there is a pyloric growth, obstruction may give early evidence of its presence. His mortality in malignant growths were 23 per cent. Considering operation, he also states there are three points of interest: Shall it be with suture or Murphy button? Shall the anastomosis be made on the anterior wall of the stomach or posterior? In other points, shall the two limbs of the bowel be separately anastomosed, as in primary operation? Total gastrectomy has been performed about fifteen times with five deaths; of course, partial gastrectomy has a very much better prospect of successful issue than the major operation. The surgical treatment is the only treatment that can be looked forward to with any possible hope of more than making life bearable while the disease exists. It seems that the few cases which have been operated upon warrant the operation in certain instances. I think it would need to be an extremely early diagnosis and a very favorable condition where I would advise either gastrectomy or a gastrotomy.

Mrs. B., aet. 68, was first seen in March and gives the following history:

Has suffered from cold and grippe in the winter and had several attacks of diarrhea. When I was first called patient's extremities were very much swollen, the edema was very marked from toes to above knees, deep pitting upon pressure. Both hands swollen slightly. General anasarca. Gives history of loss of flesh and is gradually growing weaker. Patient was still doing household duties, cooking and doing some washing at times. Appetite fair. Digestion poor.

Examination of the heart revealed slight murmur radiating from the apex as far as the axilliary line on the left side. No murmur in the back or transmitted upward at all. There were several supra-clavicular glands noticeable, and these seemed to grow at times, then to recede more or less. Patient stated that she had often had enlarged glands of the neck.

Urinary examination reveals murky, muddy-looking urine, specific gravity 1002 with slight trace of albumin, not more than a pint in 24 hours. Some epithelial casts, the elimination of urea was normal, reaction acid. Patient was put on infusion of digitalis ½-oz. doses four times daily. After putting patient on this the urinary secretion came up to three pints and remained about that amount until just a few days before death. The swelling disappeared rapidly and was entirely relieved in two or three weeks. Patient had begun to object very much to the digitalis, and it was discontinued and put on sangogen capsules four times daily. She seemed to gain some strength for a while, but later stomach and bowels both began to give some trouble: that is, there was nausea, loss of appetite and more diarrhea, at one time she having had an attack which exhausted her very much and appeared to be cholera morbus, following rather more hearty meals than usual of vegetables. Fruits and vegetables we again withheld, and Dr. Wm. Bailey was asked to see her in consultation. I neglected to say that at this time, and before, she had a great deal of gas in the lower bowels, frequently amounting to meteorism.

Dr. Bailey suggested a preparation of creosote, salol and bismuth in lactopeptine elixir and supportive treatment, giving a bad prognosis. She improved, and was able to walk around in the room again, but inside of a week, however, her improvement ceased, and she soon began to have marked pain in the left lumbar and epigastric region. Upon physical examination, found a mass just left of the median line on the border of ribs, which seemed to be fixed the first time I examined her. After the gas had been expelled, the next morning, was able to outline this mass more fully, found it extending to the median line and movable. The mass seemed to be the size of a small

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fist, very little pain, more soreness. This was about August 10.

Dr. Stucky was asked to see her, and his attention was called to the tumor. He thought it likely malignant, but was not sure of its location, rather doubting it being of the stomach. She did better, had a good deal of nausea, some of it being accounted for from the fact that she had a chronic posterior nasal catarrh, and there was constantly dropping mucus from the back of her nose. She had begun to complain of being unable to swallow. I thought it nervous, or perhaps the large amount of mucus in her pharynx preventing it, as she had frequently vomited in the early morning, while she was trying to get the mucus from her pharynx. Here was a patient that gave many of the classic symptoms of cancer of the stomach, still I did not suspect it until very late in the illness, being led away by the dropsy, the heart symptoms and the small amount of urine with the low specific gravity.

Two or three times between the 10th and 20th of the month I questioned the daughter, who was the nurse, very closely about the character of the fluid vomited. She ordinarily gave a history of mucus and water, and about the 15th or 18th, after questioning her closely, she gave a history of brownish fluid being vomited which she took to be the medicine. It occurred to me that this might be blood, and I asked her if she did not think it possible that it might have some blood in it, but she thought not.

On the morning of August 25 she vomited some blood and I was hastily summoned, found quite a blood clot in the bowl, and in a few minutes she began vomiting quite frequently, this continuing from that time until the afternoon of the same day, when I gave her a quarter of a grain of morphine. On being summoned the first time, in the morning, after she vomited the blood, I gave a teaspoonful of extract of ergot, and repeated antiseptic ergot hypodermatically about four hours later, as what had been taken by the mouth was thrown up promptly. She was allowed no nourishment during the day, and in spite of the hypodermatic injections of the antiseptic ergot, she continued to vomit until a quarter grain of morphine was given and she had several hours' sleep without vomiting. The first time she awakened, however, she vomited blood very freely, and two or three other times during the night. She died on the morning of the 26th at 5 a.m. Was not allowed post-mortem, but my diagnosis was cancer of the large end of the stomach. Patient had one sister with cancer of the breast excised by Dr. Vance some seven or eight years ago.

Mrs. E., aet. 54, rather slight, delicate looking woman with slight jaundice, furred tongue, weak, rapid pulse and temperature normal, with the following history:

For seven weeks has been losing flesh; some nausea and vomiting, especially after meals, with a great deal of pain in the epigastric region radiating to the right hypochondriac region. Has suffered so at times that opiates had to be administered, these pains especially coming on from 1½ to 2½ hours after meals. Attacks of pain have seldom occurred during the night. Patient has always suffered more when sitting up or on her feet.

Under careful diet these attacks have been a little less frequent, having no absolute cessation. Temperature has never been higher than 99½°.

This lady was brought to Dr. Vance with supposition that she was suffering from gall-stones. After having examined her he did not think it was a case of biliary colic and referred the lady to me. Upon examination I noted slight jaundice, feeble, rapid pulse, furred tongue and a bad breath, and upon physical examination found a small, well-defined tumor just a little below and to the right of the ensiform cartilage, she being exceedingly tender over this point. Upon firm but gentle pressure I noted considerable pulsation,

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with a history that there had been such throbbing in the stomach that she was frequently annoyed by it, especially when lying down. I gave the patient a test-breakfast of roll and a cup of tea, and the following is a report of the stomach contents removed in about two hours afterward, by Dr. J. E. Hays:

Analysis of Gastric Juice.—Name, Mrs. E.; age, 54; removed in 2 hours; amount of filtrate, 720 cc.; residue, small; reaction, congo red, negative; litmus, acid; free HCl.-amidobenzol, negative; phloroglusin, negative.

Topfer's Quantitative Estimation.—Total acidity, .0508 %; free HCl., none; combined HCl., .0508 %; total HCl., .0508 %; acid salts, .0508 %; lactic acid, none; acetic acid, none; butyric acid, none; pepsin, absent; peptones, absent; propeptones, absent; starch, absent; erythodextrin, present; acroodextrin, absent; maltose, present; bile, none; mucus, none; blood, few cells; pus none.

Gross and Microscopic Characteristics—Clear, watery filtrate; squamous and columnar epithelia; starch, partially digested.

With a tumor present, the foregoing history and the analysis, I made a diagnosis of cancer of the stomach and advised a very careful diet, which largely being fluids, and her removal home to await the final outcome. Would state that this patient had been rather a delicate woman all her life, however, without any acute illnesses. Had one child to die of tuberculosis, and either her mother or father died of tuberculosis, I have forgotten which. There was no blood examination nor urinary examination made.

Miss R., aet. 25. Was summoned hastily to see this patient June 20, and found she had had extreme hemorrhage from the stomach, having first vomited food that she had taken several hours before, followed by a large amount of dark clotted blood, with a very free hemorrhage of fresh blood. Found patient very anemic, pulse not very much accelerated, with good volume. Patient had a marked cachexia, mucous membranes were almost white. The first peculiar thing I noted was her marked cachexia with such a good pulse. Had never consulted a doctor, had been losing flesh for several months, her appetite at times very good, but usually poor, with a desire for sweets and sours especially. At times ate a great deal of meat without any other food at the same meal. She had occasionally vomited, though had not noticed any blood. Had complained of peculiar fullness and throbbing in her stomach for several weeks.

This patient vomited upon my arrival a very large amount of pure, bright red blood. I immediately gave a hypodermatic injection of antiseptic ergot and advised nothing being taken by the mouth whatsoever. Patient had no further hemorrhage during the night or next day, and the evening of the next day was allowed to take a roll and a cup of tea, and in about a half-hour she vomited the food taken, followed by a very large hemorrhage entirely of red blood (a very little dark clotted blood coming first). She was again denied any food, not even allowed to have a drink of water for twenty-four hours. Two raw eggs and a pint of milk were given by the bowel after she had had an enema of plain water to relieve the lower bowel. This was retained and the patient had a comfortable night and remarked that she felt much improved the following morning. The third night she was very restless and had a large hemorrhage about 4 o'clock the following morning, a large amount of clotted blood first, followed by bright red blood. She was again given antiseptic ergot hypodermatically and was not given any food during the day. She became very restless and absolutely refused to have the nutrient enema, she becoming so restless that it was necessary to administer ½ grain of morphine hypodermatically the following night. She became comatose, but on the evening of the fifth day was aroused and

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vomited a large amount of dark clotted blood during the night and the next morning seemed very much brighter and even stronger. She was allowed to have sherbet, but each time she took any quantity she had slight vomiting, blood being very pale and in very small amounts. The following night she went into a stupor and died the next morning.

Post-mortem was not allowed, though cancer of the stomach was diagnosed. I failed to state that there was a tumor in the epigastric region easily palpated and somewhat movable. I report this case especially because of her age, it being one of the few cases below thirty years. Her father is living and mother died of chronic illness, probably tuberculosis. Other members of the family living are in good health, a brother and sister, both older than the patient.

NASO-PHARYNGEAL ADENOIDS.*

BY J. A. STUCKY, M.D.,
LEXINGTON, KY.

By adenoids is meant enlargement of the lymphatic structure, known as Lusch's tonsil, or, more familiarly, the third tonsil. There are several interesting theories as to the cause of this hypertrophy, among which may be mentioned, (1) A predilection for excessive nutrition and overgrowth, possibly a tropho-neurosis of this tissue. (2) Greater liability to inflammation and anatomical peculiarities exhibited by successive generations. It is generally accepted that this disease is not due to specific inheritance.

The theory has been advanced by embryologists that these growths are due to arrested fetal development, and the fact that they usually disappear between puberty and adult life is cited as proof of their rudimentary character. Hypertrophy is most frequently caused, however, by successive acute inflammation of the gland itself, or inflammation due to a streptococcus, or similar infection. Morton believes that 90 % of all cases are the result of congenital processes, and that attacks of measles, diphtheria, scarlet fever, etc., only act as exciting causes, serving to increase the lymphoid hypertrophy present from birth.

The tendency of this lymphoid tissue to disappear after puberty might be explained by the direction of the nutritive forces to the organs of procreation. While the structure of the lymphoid tissue of the pharynx and naso-pharynx are histologically almost identical, it is necessary to consider certain distinctive points peculiar to each. They undergo no uniform metamorphosis, but tend to increase and diminish at different periods of life, though in a general way their location determines the time of maximum development.

These hypertrophies, occurring most often in young children, have a tendency after puberty to disappear, though they frequently persist until after middle age. The faucial tonsils are more exposed to inflammation and infection, owing to their location in the alimentary tract. The tonsillar crypts and the pockets formed by adhesions between the tonsils and faucial pillars, furnish lodgment for food and other irritable substances where hypertrophy may be continued.

Various investigations have demonstrated that previously healthy tonsils cannot only be invaded by, but can soon rid themselves of micro-organisms, and also that micro-organisms are capable of passing through the mucous membrane and the lymph adenoid tissue and entering the blood.

Packard believes that the function of the tonsil is to offer a barrier to the entrance of organisms into deeper tissues, and that acute articular rheumatism, endocarditis, etc., occurring after tonsilitis, may be due to toxic absorption through them.

Clinical evidences of the power of the tonsils to absorb infectious material are many, and Jonathan Wright claims

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that streptococci are absorbed when rubbed upon the tonsillar tissues of animals.

Kyle (1902) calls attention to the fact that while it is true in the majority of cases any alterations in the pharyngeal tonsil are such as to demand surgical interference, there are certain constitutional symptoms caused by infection of this structure which should be classed as non-surgical, and be called medical adenoids. His classification is:

(1) Constitutional manifestations associated with the enlargement of the adenoid structure to such an extent as to demand surgical interference, and (2) where the adenoid is very slight, and in no way interfering with the nasal respiration. When the latter condition exists there are no symptoms of obstruction, hence as a casual factor of disease it is liable to be overlooked. The systemic phenomena associated with infection through this adenoid structure is practically the same, whether the adenoid structure be of an obstruction, or whether it is non-obtrusive. One of the most marked peculiarities of this structure is its tendency to fluid infiltration, filling up very much the same as would a large lymphatic space, it being affected by vascular changes very rapidly, and the tendency to enlargement when the patient is suffering from any systemic trouble. When in the recumbent position and the circulation slowed, the structure becomes more edematus, and interferes with respiration, causing the night mouth-breathing. The intimate relation of this gland structure to the brain meninges was first described by Drs. Harrison Allen and J. Solis Cohen, and it is shown to be particularly susceptible to inflammation, and when this occurs there is high fever and other constitutional manifestations. With the slightest infection of this gland the constitutional symptoms are entirely out of proportion to the local changes. The most brilliant results from the operation of adenectomy have been gained where a very small amount of the gland existed, not enough to cause any obstruction in breathing, or any of the usual symptoms of its presence.

It is not the presence of the quantity of the adenoid, as much as its location and pathological condition, that do the most serious harm. It seems as if the gland itself is able to take up rapidly materials which come in contact with its surface, or materials which are manufactured within the gland structure, owing to inflammation or pathological process.

Frequently we have febrile attacks in children, in which we find irregular temperature, restlessness, probably some symptoms of cold, but no well-defined condition. The breath is heavy, there may or may not be nasal discharge, temperature ranging from 100° to 104°. The cervical and sub-maxillary glands are enlarged. There may be some slight throat cough, in fact, the symptoms are so general that frequently the physician is led to believe that some serious disease is developing. There is often the chilly sensation, probably, not amounting to complete chill. The patient is watched for developments and treated in a general way, given purgatives and diuretics. The febrile condition will last probably from two to four days, coming on suddenly and gradually disappearing. When recovery has taken place, the cause is usually assigned to some gastric or intestinal disorder, and the child goes on to apparently complete recovery.

These attacks occur in children at irregular intervals. Experience has shown that the adenoid structure, though present in a small amount, is responsible in a great many cases for the symptoms described. The symptoms of a cold in the head, which are misleading to the physician, and which are out of proposition to the nasal discharge, are due to the fact that the obstruction is caused by the inflammatory enlargement of the adenoid

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structure, and while the anterior nares may be fairly free, the adenoids obstruct the post-nasal space, giving all the symptoms of a cold in the head.

In twenty-four out of twenty-seven cases of follicular tonsillitis, observed by me before the characteristic white spots of exudation appeared, the patient complained of intense aching all over, especially in head, back and legs. The nose was dry and "stuffy," chilly sensations prevailed and no appetite. Posterior rhinoscopic examination showed the adenoid tissue to be red, dry and edematus, the turbinates inflamed and swollen, and the temperature was highest and suffering greatest about twelve or eighteen hours before the diagnosis could be made. Doubtless many cases of follicular tonsillitis are preceded by acute inflammation of the pharyngeal tonsil (adenoid), or possibly is secondary to or infected by it. This statement can be proved or disproved with difficulty, because (1) of the difficulty of using the rhinoscopic mirror with children, who are the most susceptible to the disease, and (2) most of these cases are seen and treated by the general practitioner, who rarely makes an examination of the pharyngeal valut.

Undoubtedly, inflammation of this gland structure may be, and frequently is, secondary to the systematic condition, but I believe the cases above described are more frequently met with than is generally believed, and one of the best proofs that absorption of this infectious material through this gland is the cause, either direct or associated, is when remedial agents are applied for the relief of this inflammation, and the prevention of infection, or the removal of the gland structure, even though it be non-obstructive, the tendency to rapid recurring attacks is relieved.

I believe it will be shown in the near future that measles, scarlet fever, whooping cough, diphtheria and influenza enter the system through the naso-pharynx, and agree with Horne, of London, who says, "The upper respiratory tract is most frequently the site of primary systemic infections other than those commonly assigned to it, and that more than casual examination of this region should be made in the clinical investigation of diseases of obscure origin. The naso-pharynx is not only a source of, but factor in, modifying or arresting infection.

Treatment.—The treatment in these cases is simple. In the acute stage, free purgation, stimulate secretion and aid excretion so as to favor elimination. Sodae benzoate in 3 to 10 grain doses every two hours until relieved is as near a specific as any drug I have ever used. Locally, any soothing alkaline antiseptic spray is helpful. After the acute trouble has subsided, nothing short of surgical treatment promises immunity from recurring attacks, or safety as to health, hearing and happiness to the patient.

Conclusions.—The obstructive and non-obstructive adenoid tissue when diseased is a menace to health, hearing, mental and physical development, and should be radically dealt with. It is far more serious in effects than disease and the enlargement of the faucial tonsils. Frequently, when the pharyngeal tonsil is thoroughly removed, the enlarged faucial tonsils rapidly assume normal size and function. While this is not the rule, I have seen it occur so frequently that it is safe to say it is far more than the exception.

The question is frequently asked, Do these growths recur? Occasionally they do, especially in the so-called lymphatic and neurotic temperament. The more delicate, undeveloped and poorly nourished the child, the more apt are we to find a recurrence. Whether this is strictly a recurrence, or the development of some tissue not removed, is still an open question. For these reasons, in cases like the one just referred to, alterative tonics should be given at intervals for some months after operating.

As to the method of operating, I think it safe to predict that it will not be long before the forceps will be en-

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tirely discarded, and the curette and finger alone will be relied upon. Also, that the position of the patient will be on the side, instead of the back, so as to eliminate much of the danger of suction of blood into the larynx and the prevention of swallowing blood and growth removed, thereby preventing much of the nausea generally attributed to the anesthetic.

I know of no operation so far-reaching and productive of greater good, in that, while it is immediate in its results, it is also preventive of so many serious conditions, and yet in this southern portion of the Mississippi Valley it is most unappreciated, under-estimated and under-paid, because classed as a simple and trivial affair.

The technique of adenectomy is simple, as compared with many other surgical operations, but should be just as conscientiously carried out. When the proximity of the growth to the brain and meninges, the nasal accessory sinuses, the communication with the ear through the Eustachian tube, is considered, especially the danger of injury to a bulging orifice to this tube, to say nothing of the very delicate and vascular location of the growth, the operation cannot be considered a simple or trivial one. A third tonsil or adenoid cannot with safety be hurriedly scraped or jerked out without serious risk to the patient and to the reputation to the operation.

When thoroughly and carefully done, the time consumed while short, the risks and responsibility involved and the results obtained, are only equalled by some of the so-called major operations done by the general surgeon.

DISCUSSION.

Dr. A. J. Ochsner, of Chicago: Mr. President, I am certainly quite out of my sphere in being called upon to speak on this subject, although I must confess to having removed adenoids and enlarged tonsils in many hundreds of cases. I agree with the essayist as to the ultimate harm done to these patients if the adenoids are left. It is very great, because the patient is constantly exposed to the absorption of septic material. He is constantly exposed to extension of the infection into the Eustachian tubes. It is the presence of these adenoids which gives rise to deafness in children, which deafness is sometimes attributed to scarlet fever. The infection present during scarlet fever may give rise to the adenoids; the infection extends into the Eustachian tubes and into the middle ear, and thus we have this form of deafness.

In many of these cases I have observed there has been a faulty development of the chest. The obstruction which accompanies the presence of adenoids has given rise to improper breathing and narrowness of the chest. For that reason, although I am not practicing any specialty whatever, in a very large number of these cases I have found great improvement in the condition of these children following the removal of adenoids. Unfortunately, these adenoids are observed among the children of the working classes in our large cities. The children are improperly nourished; their parents are not in a position to give them proper care during the infectious diseases from which they suffer more commonly than the children of wealthy families. I must confess that in many cases the surgeon is very much underpaid for this operation. I have almost always performed it in charity patients.

Dr. J. F. Barnhill, of Indianapolis, Ind.: I regret very much that others do not discuss this paper, but before the author closes the discussion I would like to say a few words in the way of emphasis of what the speaker has brought out. It has been stated that adenoids are an important factor in many diseases. The speaker who has just had the floor has brought out many of these. The essayist brought out others. But we have stomach diseases, without question, arising also from adenoids. The experience which I have had leads me to believe that these ade-

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noids undergo atrophy to a great extent at puberty, yet the atrophy is in a great measure in the pharynx. The throat enlarges at this period simply to accommodate the adenoid or adenoids better. But an examination of the throat will reveal in the vault of the pharynx a cavity with many fissures, constantly filled with muco-purulent or cheesy material. The patient either coughs or spits a good deal, or else permits this material to enter the stomach and create havoc there. The doctor did not overestimate the importance of this when he said it is a far-reaching causative factor. It has been said that more than 95 per cent. of all ear diseases come through the Eustachian tube, and I think it ought to be more frequently stated than it is that nearly all of that 95 per cent. that come through the Eustachian tube are the result of obstruction and infection lodged in the adenoid itself. Then, when we come to understand that the greatest percentage of all ear diseases is due to the adenoid alone, we realize from an etiological standpoint that it is highly important to get rid of the cause.

I agree with what the essayist has said in regard to it not being a trivial operation. It is a short operation, but he who believes it to be a trivial one has either not performed it frequently or he misjudges the nature of it entirely. I feel more nervous about doing this operation than I would in opening the mastoid extensively, or even the brain itself. Many deaths have been reported from the operation. It is an operation which, if it is not completely done, is a failure. As to whether adenoids recur, it is probable that they do not if they have been thoroughly removed. They grow again, however, if only parts of them have been taken away.

We are undoubtedly underpaid for operating on adenoids. It is a risky operation; one that gives the surgeon a great deal of bother in many instances, because of the dangers in doing it well. There is a peculiar danger attached to the removal of adenoids under an anesthetic. It has not been settled whether that danger is due to the anesthetic itself or to the manipulations of the naso-pharynx, or to the inhalation of blood. One thing is certain, namely, it is not free from danger. Operators, who do dangerous, yet skillful and thorough, operations, with good results, ought to be paid for their work. Undoubtedly there are many cases in which the removal of the appendix is as simple and as easily done as the removal of adenoids, and therefore this operation should be paid for accordingly. Physicians should not teach patients that it is trivial, or that it should only command a fair price for fair skill.

Dr. William Cline Borden, of Washington, D. C.: I have listened with a great deal of interest to the paper and to the discussion on it. There is one point, however, which it seems to me has not been emphasized sufficiently, and that is the fact that this disease is so frequently overlooked, not even suspected, I might say, by the general practitioner. I think I am safe in making the assertion that children, when they present themselves to the general practitioner, who are mouth-breathers, or have indications of it, either partial or complete, should be always suspected by the general practitioner as having adenoids, and in a great majority of the cases such a suspicion will be well founded. The general practitioner should not content himself with the fact that the pharyngeal tonsils are enlarged, but he should look for naso-pharyngeal adenoids. Of course, not every general practitioner can make a diagnosis, but whenever he suspects a case, if he is not capable of using the laryngeal mirror or making a digital examination, he should refer the case to a specialist in order to determine whether adenoids exist or not. Only in this way can he do justice to his patients. I have seen a great many of these cases at one time and another. When I was chief of a large clinic, I was struck with the large number of

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children who had this disease, but the disease was overlooked by the general practitioner.

I was impressed with the operation itself, like the essayist and the gentleman who discussed it. I do not consider it a trivial operation. While I have done it a great many times, I would rather do an appendectomy than do this operation, not possibly because it is very dangerous, but because it is difficult to do well. It requires great skill to remove these naso-pharyngeal adenoids thoroughly.

In regard to the method of operating, I was surprised to hear the essayist speak of doing it with the patient in the recumbent posture. I have seen a great many operators do it by turning the child completely on its face, bringing the head and shoulders over the edge of the table, and cleaning out the naso-pharyngeal adenoids, and all the hemorrhage running down hill, so that there was no danger from it.

Dr. Allen De Vilbiss, of Toledo, Ohio: So far as the question of pay is concerned for operating on adenoids, I want my friends in Kentucky and the Mississippi Valley to brace up. If the patients are not paupers, the surgeons should charge for their work. If they do not charge enough to pay patients, it is their fault. I say when patients are able to pay a good fee, let them pay it. When they are pauper patients, we will gladly do the operation for nothing.

I want to emphasize one point the essayist brought out, and it is this: If the diagnosis cannot be made by the laryngeal mirror, make it by touch. When I was engaged in nose and throat work, we looked for a cessation of adenoids after puberty. But this is a mistake. The processes were all set up prior to that time, and the disease becomes progressive. I believe in early operation on adenoids. If a child is a mouth-breather, or if it has follicular tonsillitis, I would look for adenoids.

Dr. Stucky (closing the discussion): I am very much obliged to those who have discussed my paper. Dr. Ochsner mentioned the point that adenoids were more frequently found in children who were underfed and poorly clothed—the pauper element. I have found adenoids in the overfed. I do not know which are to be pitied most, the underfed or the overfed. I do not know which does the most harm.

I am glad Dr. Barnhill said what he did about adenoids undergoing atrophy. This atrophy is really apparent, and the retained secretions become muco-purulent, so that some of the most obstinate cases of so-called post-nasal catarrh, in whom it is difficult to remove the crusts that are so tenacious, are the result of atrophy of adenoids.

Dr. De Vilbiss spoke about follicular or recurrent tonsillitis. When I get a history of recurrent tonsillitis in a child, I always suspect adenoids.

Regarding what Dr. De Vilbiss said about pay for this operation in Kentucky and Ohio, it is unquestionably a lack of education on the part of the people. They have not been educated up to the point of paying as much for this as for similar operations. That is the reason I emphasized the point that we could not call it a trivial operation. It is referred to as a light affair, and people want to pay a small fee for it. The people should be educated by the general practitioner that it is an operation that amounts to a great deal. There are many surgeons who would rather do an abdominal operation than perform an adenectomy.

COMPLETE CONGENITAL CLEFTS OF THE PALATE.*

BY JAMES B. BULLITT, M.D.,
LOUISVILLE, KY.

The treatment of congenital cleft palate, while a very old procedure, has never been an eminently satisfactory one. The deformity, especially when the cleft extends through the alveolar process of the maxillary bone and the

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lip, is a most deforming and depressing one; first, to the parents to whom is born such an imperfect and afflicted infant, and, later, when the infant has grown to an understanding and appreciation of the conditions, to the individual himself. Not only is the beauty of the face materially marred by this deformity, but, more important, the voice is always very imperfect, articulation in many cases being so bad as to render the speech unintelligible. This misfortune necessarily unfits the individual for nearly all occupations and renders him a permanent object of curiosity and pity.

As stated before, operative procedures have not been entirely satisfactory in remedying this deformity. While a mechanical closure of the palate can be effected satisfactorily in some cases, the defective speech is by no means always remedied in even the most successful of the closures. This is owing to two factors—first, that the palate, as a result of the operative procedures, is rendered inflexible and non-vibrant, its muscular control being entirely lost; second, when a defective method of speech has been acquired, subsequent restoration of the palate leaves still behind it the defective method of speech. This fact has caused some surgeons, especially dental surgeons, to express the opinion very strongly that cleft palate from the standpoint of function is more successfully treated by obturators, by artificially supplied palates, than by surgical procedures.

In operations for cleft palate the factor of age is of the greatest importance. If the cleft could be repaired before the function of speech is established there would be every probability and expectation that the child would learn to speak more correctly than would be possible with the repair at a later time, after incorrect speech had been established. There are two reasons for deferring the early repair of this deformity; first, the fear that the infant would be unable to stand blood loss, and that the shock of operation would be necessarily fatal in a large percentage of cases; second, that the parts are so small and the flaps which would have to be raised so thin and delicate as to make the operation technically very difficult. For these reasons most surgeons have advised that cleft palate be not operated upon until the child has attained a somewhat advanced age, this age being variously placed at from 3 to 7 years, advising at the same time, however, that the operation on the lip be undertaken early, by the completion of the third month.

The early repair of the harelip has this advantage, that in clefts extending through the alveolar process of the maxillary bone the pressure restored by the repair of the lip tends to be corrective of the forward part of the bony deformity. On the other hand, closing the lip first is very like doing first a perineorrhaphy and later an operation on the cervex uteri. The space through which the operation has to be done is unfortunately narrowed and the second procedures rendered thereby more difficult.

The observations and experiences of Dr. Truman W. Brophy, of Chicago, seem to throw an entirely new light on the subject, and if his claims can be verified certainly many of the old-time conceptions concerning the time and method of operation for cleft palate will have to be materially altered.

In a paper read before the Third International Dental Congress in Paris in 1900, he makes the statement that he has operated 570 times for the cure of cleft palate, and of these operations 211 were upon children younger than 6 months, and that the best age to select for operating is within three months after birth. Of the whole number of patients operated upon two died, both of these deaths occurring in children 3 years of age; in children under 6 months of age no deaths occurred. This record seems almost unbelievable, but Dr. Brophy is known as a man of truth and reliability amongst the profession, both dental and medical, in the city where

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he lives. His opinion is that the surgical shock is less, because the nervous system of the child is not well developed, and is not, therefore, capable of receiving the same impressions that it would later in life. Of course, if excessive hemorrhage occurs the result might be disastrous, but in the operation detailed by Brophy to be done at this early age there is no great loss of blood, and my own experience confirms his statement that these very young infants react exceedingly well.

In the complete clefts extending through soft and hard palate and the alveolar process of the maxillary bone, Brophy proposes a bone-to-bone union of the hard palate. To accomplish this it is necessary to operate within the age he mentions, that is, three months, because up to this time the bones are soft and can be readily bent and shoved toward the median line without necessarily producing fracture.

Brophy's method of procedure is as follows: The child being anesthetized and placed with the head on a lower level than the rest of the body, the edges of the bony cleft are freshened by bistoury and scissors, then the bony cleft is closed by lateral pressure on the alveolar processes of the maxillary bones; pressure of the hands sometimes suffices in very young children to accomplish this; sometimes it is necessary to employ a special pressure forceps for this purpose. Occasionally in young children, and more often in children who have passed the third month, it is necessary to divide the bone through the malar process by knife or chisel, when the apposition can be more readily effected. The cheek is now raised and a handled needle with eye in the point is inserted well back toward the posterior extremity of the hard palate, just back of the malar process and high enough to be above the transverse plate of the palate bone. This needle is carried through the substance of the bone above the horizontal plate of the palate to the central fissure, and the same procedure is carried out from the opposite side, the needles having been previously threaded with strong silk. We now have two silk suture loops in the center of the cleft, and by passing one loop through the other and then withdrawing, one loop is carried through both maxillary bones. A No. 20 silver wire is now drawn through by means of the silk suture, and replacing it. The same process is repeated at the front portion of the maxilla. Two lead plates, of about No. 17 American gauge, are next cut to fit the convexity of the buccal surface of the bones. In these plates eye-holes are made, through which are passed the protruded ends of the wire on each side. The two ends of the wire on each side are now twisted together over the lead plate, constituting heavy tension sutures which do not cut out. Pressure is now exerted with the thumb and fingers, or by means of a specially designed forceps, as already detailed, and the slack is taken up by twisting the ends of the wires. This process is to be continued until the bony edges of the cleft lie snugly together. Occasionally it will be found advisable to insert some fine silk sutures here and there along the edges of the cleft to insure more perfect coaptation.

The after treatment is very simple, consisting of simple cleanliness of nose and mouth. Liquid food is supplied by means of a spoon. The lead plates and wires cause some abrasions of the mucous membrane, but these are of no consequence. The lead plates and tension sutures should be left in place from two to four weeks.

If this part of the operation results successfully the bony cleft is closed for its whole length and subsequent operations will have to do with the closure of the soft palate and the harelip. These two latter operations should be undertaken at varying intervals according to the condition of the child and of the parts, the object being to complete the entire repair before the age at which the child begins to speak. Brophy advises that the second operation should be undertaken from one to two months

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after the first, and should be the repair of the soft palate, leaving the harelip for the final operation a few weeks afterwards. After the bony cleft is closed by the first procedure mentioned, leaving the harelip open until after the second operation on the palate is not so important; therefore, if desired, the harelip can be made the second operation, or the soft palate and the harelip can be operated on at the same time.

It is much easier to make a perfect bony closure at the alveolar margin than at the posterior portion of the cleft in the horizontal plate of the palate bone, where a little separation is very apt to be present at the time the closure of the soft palate is undertaken. The operation for the soft palate closure will, therefore, usually be made as follows: The edges are first to be pared clear to the tip of the uvula, then with a hoe periosteal elevator a muco-periosteal flap is to be dissected up from the back part of the palate bone on each side, dissection being continued well up to the alveolar process. These flaps are left attached along the alveolar process. It is especially important to separate the membranes at the distal surface of the horizontal plates of the palate bone. These membranes also cover the nasal surface of the palate bones and extend down to form the superior distal surface of the soft palate. These flaps, when brought down, ordinarily fall easily together, and there is no necessity for making lateral incisions for relieving tension.

The further steps of the operation consist in passing silver wire tension sutures from side to side through the soft palate and the flaps raised from the hard palate, well back from the free margin of the flaps. The ends of these sutures are brought out through holes in the lead plates and are twisted together, the lead plates being long enough to extend nearly to the end of the soft palate, twisting the ends of the wire sutures to overcome any objectionable tension. Finally the free margins of the flaps are united by interrupted silk apposition sutures. These plates serve as splints and render healing of the margins much more certain.

The avoidance of necessity for making the lateral incisions into the palate to relieve tension, the division of the tensor palati and levator palati muscles, is a matter of considerable importance, for the reason that such division oftentimes interferes materially with the mobility and motility of the soft palate, on which the perfection of speech is to some extent dependent. When the muco-periosteal flaps are brought downward a space is left between the upper surface of these flaps and the horizontal plates of the palate bone. This space is filled in by plastic material which is probably eventually ossified. In this way the height of the arch is somewhat reduced.

The operation for harelip is the final procedure and is rendered much easier by the previous closure of the bony cleft. It is, of course, the less difficult of the procedures and need not be further described, except to say that when possible the flaps should be so shaped as to bring the fleshy teat in the middle line instead of in the lateral line of the nostril. This restores to the upper lip its proper bow-like aspect.

Some objections have been offered to the operation as made by Brophy. The one which applies to the danger of operating upon such young children is fully disposed of by recounting Dr. Brophy's experience.

It is further objected that bringing the bones together from side to side tends to narrow unduly the upper jaw, thereby causing the bite of the upper teeth to fall within that of the lower teeth. Brophy has also shown by taking plaster casts of these mouths, that there is always an over-bite in the divided upper jaw, and that the closure of the bony cleft serves simply to restore the proper articular relations with the lower jaw, not to unduly contract the upper.

The possibility of causing stenosis

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of the nares is also urged as an objection, and my observation is that some such stenosis is produced. Brophy claims that this is a matter of no consequence, and that the development of the parts will go on uninterruptedly, producing practically normal relationships by the time growth is complete. Not infrequently some disarrangement of the teeth will result, but this can be corrected by the orthodential measures well known to the skilled dentist of the present day.

My own experience with this particular operation covers only three cases, all three operated on during the present year. The first of these was in a child of about 4 months, and was only partially successful, as the alveolar process only remained in apposition, the bony cleft behind separating to some extent after the removal of the silver wire sutures and plates. In this case the sutures and plates were removed at the end of the second week, and it was after this time that the separation occurred. I am, therefore, convinced that the plates should be left in place for a longer time than two weeks.

The second case was successful in so far as the bony cleft was concerned. The second operation on the soft palate did not succeed entirely, a small opening still persisting just at the junction of the soft with the hard palate. This can probably be dealt with successfully at a later date.

The third case was in a child of very backward development and poor nutrition. Only the operation on the hard palate has been done up to the present time. It was a complete success and the child is now improving in its general condition and will not be interfered with further until it shows itself well on the road to good general nutrition.

In so far as this limited experience permits I feel that I can agree entirely with what Dr. Brophy has said about the small amount of shock sustained by these very young infants. All three of these children reacted beautifully and at no time was there anything alarming in their condition. In the primary operation very little blood is lost. In the operation on the soft palate blood loss can be very effectually controlled by the use of adrenalin. A matter of the greatest importance is the proper placing of the child's head in relationship to its body. If the child be laid flat on the table it is almost inevitable that a greater or less amount of mucus and blood will be aspirated into the lung, producing what may be a disastrous pneumonia. This is readily avoided by elevating the child's body and letting the head hang low. I have found an excellent arrangement to be a chair placed on an ordinary operating table on its face so that its back is at an inclination of about 45 degrees. On this a pillow is placed, and on this the child, its feet being made fast to a round of the chair. This brings the mouth at a good height and convenient position for operation, and precludes the possibility of aspiration.

I have employed chloroform anesthesia given on the ordinary Esmarch inhaler. In the future, however, I expect to employ the Junker inhaler with a tube passed through the nose. This would do away with some of the waits which are necessary with the Esmarch inhaler.

In conclusion I am almost tempted to say that failure to subject a complete congenital cleft of the palate to operation at the early age mentioned is as culpable as it would be to permit a child with congenital pes equino-varus to pass the most favorable age without operation.

For anorexia from gastric hypochylia:

℞ Strychnia sulph . . . . . gr. ⅛
Ac. hydrochlor. dil . . . . . ℥ss
Ext. condurango. fl . . . . . ℥iss
Elix. gentian. . . . . ℥vi

M. Sig.: Tablespoonful ½ hour before meals, in 2 ounces of water, through glass tube.

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SOME OBSERVATIONS ON THE PROGNOSIS IN ACQUIRED SYPHILIS.*

BY I. N. BLOOM, M.D.,
LOUISVILLE, KY.

The prognosis in syphilis depends chiefly upon two factors, the individual and the time at which treatment is begun. Assuming that the treatment is begun at the beginning of the disease, the role that the individual plays is dependent largely upon his habits and upon his physical condition, if the patient obeys his doctor as to medical treatment.

In general it may be said that the average patient who submits to two or three years of well considered treatment is quit of the disease; i. e., it neither effects him again in life nor is it a bar to marriage. I refer to the *average* individual who presents himself for treatment. The general condition of the patient is of much less importance than one would think. A patient suffering from digestive disturbances, or with neurotic tendency, patients with uric acid diathesis, even consumptives to a certain limited extent, all make good recoveries when they co-operate with the physician. It is different, however, when the habits of the patient are such as to present obstacles to recovery. Of these by far the most common as well as the most important is the drink habit. Victims of alcohol uniformly do badly. In the first order, I should place that class known as confirmed drinkers—men who relatively take large quantities of alcohol daily without getting drunk. With such men it is difficult to gauge the dose of mercury, and indeed the dose varies with the varying physical conditions. Tissues seem less resistant and they are particularly prone to late secondary and early tertiary manifestations. The digestive disturbances to which they are subject make recurrent diarrheas a feature during their treatment, and gingivitis and other symptoms of salivation appear most frequently in them. There is in such patients a natural inertia which causes them to consult their doctor less frequently than they should and they are less likely to carry out his instructions. In such men, many of them excellent citizens in other respects, it is surprising how often the later and severer symptoms show themselves.

In spree drinkers, recovery is delayed in proportion to the frequency and duration of their sprees. It is not at all unusual to find a patient who has been doing well for a year develop ulcero-cutaneous syphilides after a spree of two or three weeks' duration. It is well, therefore, as a preliminary to treatment, to cut off alcohol entirely, or at best to permit a most moderate indulgence. The use of tobacco, too, during the first two years is productive of many annoyances, chief of which are the buccal mucous patches. I know of no form of such indulgence in which the proportions of mucous placques is not increased. The statement that 60 per cent. of those who use tobacco in the first two years of the disease suffer from mucous patches, while only 16 per cent. of those who refrain are similarly affected, must approximate closely the truth. It is rather the exception to find them in women, and this is one of the reasons why early syphilis in women is so frequently overlooked.

It is said, too, that excessive sexual indulgence is a factor in bringing on the later forms. I have never been able to define the term excessive sexual indulgence when applied to practice. I think most likely the damage in the cases referred to is done by the usual accompaniments, alcohol and tobacco.

Where there is an inherited taint of insanity, I believe syphilis helps its development, although this is purely a matter of conjecture. I have had two cases, brothers, in whom was the inherited taint through their father's family. Both contracted syphilis, one in

* Read before the Jefferson County Medical Society, Louisville, October 21, 1903.

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1884 and the other in 1882. The former, in spite of the best treatment here and abroad, died of syphilitic paresis in 1899, and the latter of the same disease two years later.

It has been my misfortune to have had quite a number of patients who suffered with lung tuberculosis and syphilis combined. These have fared badly, almost without exception. While I am not prepared to say that the tubercular process has been hastened, though I strongly suspect it, I do maintain that the syphilitic poison takes a strong hold on such individuals. The external evidences of it are seen more frequently. Such individuals rarely survive long after the tertiary period, although we not infrequently see late forms of syphilis develop coincident with the later stages of tuberculosis. The co-existence of the two diseases makes the prognosis very bad.

The course of syphilis, however, cannot be predicated on the individual build of its receptor. Strong, muscular men, who would be selected as the types of healthy individuals, have, in spite of careful treatment, developed the severest symptoms, whereas puny individuals, those who would ordinarily be the first to go to the wall in the struggle for existence, are apt to pass through the fire almost unsinged. Nor does the capacity to stand large doses of mercury seem to have any influence. I have always held that the proper dose of mercury in syphilis is the dose which just falls short of producing its undesired effects, such as diarrhea, swollen gums, etc. Taking proto-iodide as the type, I found this dose to vary from ½ grain to 3 grains daily; yet those who, for instance, are treated with minimal doses are as apt to be effectively cured as those who require a much larger amount.

That the virus of syphilis is attenuated by time is beyond question. This, too, in many cases without any treatment whatsoever. These cases, however, are only exceptions. Other dyscrasiæ do not seem to influence the disease to any marked extent. I have not found the disease more obstinate in rheumatics than in others, nor do the ordinary chronic disabilities seem to play an important role. Whether or not carcinoma occurs with greater frequency after certain tertiary developments is a question which has not been satisfactorily answered.

I found in my private practice that delayed treatment is the principal factor in the production of tertiary symptoms.

It arises generally from—

(a) Ignorance as to the existence of the disease or its late recognition.

(b) Insufficient treatment at the beginning.

By far the larger portion of my grave syphilides have arisen from the first named causes. Especially is this the case with women.

A large number of women receive the disease from their husbands and remain ignorant for years, and only present themselves when grave manifestations develop.

The lesser manifestations, too, have often been overlooked in such cases by most excellent general practitioners, who, regarding syphilis as a venereal disease and knowing such patients to be above reproach, have never seriously considered syphilis, whereas it would have been most obvious to them if the patient's social sphere had been humbler.

Even when such patients are informed with as much tact as possible of the nature of their ailment we find it difficult to manage them, for as soon as the symptoms have yielded to medicine they refuse to continue longer under observation and months or years after suffer from severer forms.

I have met cases where husbands have contracted the disease and given it to their wives, have themselves taken full and continuous treatment, but have refused it to their helpmates, fearing their fault might be thus discovered.

I have had many cases of syphilis where the patient had been assured years before by his physician that the

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local lesion was chancroidal and not syphilis.

Lulled to rest by these assurances, the secondary symptoms, perhaps light, have been overlooked entirely and the patient has suffered with the severest and most undoubted later forms of the disease, and has often, without knowing that he was infected, become the father of children with syphilitic inheritance.

I am forced to think there must be class of patients suffering from syphilis insontium whose chancres were extra-genital and in whom the diagnosis was not made and the earlier symptoms entirely overlooked.

I have had such patients suffering from severest late symptoms who were anxious to give me all the assistance they could and yet could throw no light on the existence of a primary lesion, nor could I ever discover its site or source.

Most of my deaths from syphilis, aside from victims of alcoholism, have occurred in those patients included in the class of those who were ignorant of the fact that they were affected with syphilis.

The most energetic treatment is required where such patients are encountered, and must be continued for months and years almost uninterruptedly after the symptoms are recognized and proven.

The severity of the late symptoms does not seem to correspond with the length of time which elapses between the reception of the syphilis and its recognition.

In one case which I readily recall, the disease was recognized two years and a half after the primary lesion; during that time marriage, infection of wife, and birth of two syphilitic children had taken place.

Then only was the source of the disease, the father, treated according to the most approved methods and with the patient's active co-operation. In spite of this, within three years the patient developed locomotor ataxia, and within six years of the date of his infection was dead.

Another case. A patient contracts syphilis and infects his wife, who shows no symptoms for twelve years, when a gumma of the tongue develops.

Again, the character of the woman, her social status and culture, and her well-known character and purity stood in the way of a correct diagnosis; carcinoma was suspected, not syphilis.

Without asking any questions, I insisted upon the disease being regarded as specific, and the result of treatment justified the diagnosis.

Two years after, or fourteen years after the reception of the disease, the husband visited a well-known oculist, who, from the appearance of the optic disk, made the diagnosis of probable syphilis. A second oculist agreed with the first, and the patient was referred to me by both.

The patient stated to me that fourteen years before, after sexual exposure, a small sore appeared on his penis, which his family physician assured him was purely local; this was promptly burned, and healed without causing either to suspect its real nature.

The patient had no reason in these fourteen years to think that he was other than well.

Besides the symptoms directly referable to the eye, at the time he applied, in September, 1891, his principal complaint was vertigo. Proper remedies were promptly advised and the patient remained under observtion for three months and a half. All symptoms had disappeared long ere this, but no amount of explanation or entreaty could induce him to continue treatment.

He felt well, he said, and did not see why further treatment was necessary.

In January, 1896, he returned with similar symptoms, only severer, and in addition a ptosis of the right eyelid. Three months of treatment more than sufficed to make the symptoms disappear, and again the patient refused further treatment.

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In April, 1897, like symptoms again appeared, and again he consented to take two months' treatment. Three years later he passed into other hands, the occasion being the occurrence of a sudden syphilitic cerebral apoplexy. After a partial recovery from this I met him on a car, when he told me he had been twice to Hot Springs, Ark., where he had derived great benefit.

His condition at the time I saw him with unilateral paralysis did not seem to indicate this.

A year or so later he died after a second paralytic stroke.

I cite these two cases, one a quick death after locomotor ataxia, the other following syphilitic apoplexy, because in the former case the first treatment was begun two and a half years after the primary lesion and in the second after an interval of fourteen years.

A certain number of patients suffering from syphilis go through its primary and secondary symptoms without any treatment whatever and live their natural expectancy with no further signs of disease.

It may be safely assumed that in such patients the virus has been exhausted with the production of the secondary symptoms and the patient recovers completely.

Unfortunately the numbers of this class are small and such cases cannot be predicted at any time. That they do occur the testimony of the syphilologists proves.

I have had one patient who eight years ago went through six weeks of treatment during the occurrence of his first secondary outbreak. Since then he has taken, he assures me, no medicine whatever, and has never had any signs of syphilis or other disease during that time. Of course this period is too short to draw any inferences.

I meet quite a number of patients who have had one, two or more "courses" of treatment at Hot Springs and have been pronounced cured, and yet present themselves with all varieties of the late stages of the disease.

I cannot sufficiently condemn those scoundrels (I use the term advisedly) who, after giving a patient four or six weeks' treatment, baths thrown in, at Hot Springs, when the secondary symptoms show themselves, advise them to go home, do nothing in the way of treatment, and come back in a year. I have known them to send such patients to their homes with the assurance that they were cured after one or two such treatments.

It is not within the province of this paper to comment on the methods as prevalent at this water cure fostered by a beneficent government except as it affects the prognosis, and I believe all of those who hear this paper and have treated many cases of syphilis will remember a number of such insufficiently treated patients who suffered the severest relapses who had been discharged cured.

My conclusions, therefore, as regards the prognosis in acquired syphilis may be summed up briefly as follows:

1. The largest proportion of those treated at the beginning of the attack by prevailing methods get well in from two to four years without the development of severer and later forms.

2. A small number, in spite of the most favorable attendant circumstances and the best treatment, develop such symptoms which require further treatment, and usually yields readily to it.

3. Alcoholics, tuberculotics and neurotics are very prone to later and severer syphilides.

4. Those who through ignorance of their malady, or for other reasons, begin the treatment long after the inception of the disease, are most apt to develop its severer and most intractable forms.

5. Insufficient treatment, extending over too short periods of time, are very frequently followed by severe sequelæ.

This applies to efficient treatment given sporadically, with long intervals between.

6. A very small number of syphilitics get well of the disease without any treatment.

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EPIDEMIC DYSENTERY.*

BY W. L. TAYLOR, M.D.,

COLUMBIA, KY.

I have been appointed to read a paper on the above subject, and in doing so I shall not go into a description of the disease. Everybody knows the symptoms before it gets to be epidemic. We call a disease epidemic when it gets to be common in a community.

Doctors, and the people generally, are more concerned about the prevention of dysentery than its treatment. My observation is that under any and all sorts of treatment a large majority of dysenteric patients die. Those that are treated most rationally die the soonest. Those that are scarcely treated at all live the longest. I have seen no writer take the ground that dysentery and cholera are very closely akin, but that is in accord with my observation. In both there is diarrhea; in both there is vomiting; in both there is, in typical cases, cramping in the bowels and limbs, and in both there is almost total suppression of urine. They are very much alike in their fatality. I was particularly struck with the similarity of the two complaints when, a few years ago, there was a fearful epidemic of dysentery in the western portion of our country. There had been quite a number of deaths. Several doctors had risen, flourished, and retired, without checking the ravages of the malady. At last I was sent for. It was about fifteen miles from my home, and when I reached the neighborhood a fearful state of things met me. I found old cases, new cases, and middle-aged cases. All the graveyards in that district had fresh monuments in them, erected to the failure of the doctors to arrest the disease. I took charge of about fifteen cases with a heavy heart, and with no idea as to any plan of treatment. There was a considerable sameness of symptoms in all the cases. I spent the night working with them, and until noon the next day, when I started for home. When I reached home I found a case of cholera in my town. By the middle of the next day quite a number had died. The dysentery cases had the diarrhea, but did not have the rice-water discharges. They had the vomiting, but did not have the rice-water vomiting. I did not go back to see my dysenteric patients, and never did know how they got along. While I was treating cholera they did not want me to come back. I have never seen any cholera since that time, but I have been in two or three epidemics of dysentery.

Three or four years ago we had an epidemic in our country. I treated very few cases. In my character as health officer I saw quite a number. I undertook to do about the only thing that is worth doing in exigences of this kind—I undertook to put the neighborhood in good sanitary condition; I had several filthy ponds drained off; I had them to disinfect their houses; I had a red flag displayed at every infected house, and the epidemic gradually subsided. I think this is the plan of treatment that is most likely to bring satisfactory results. I believe that dysentery is contagious in a way, not like measles, or small-pox, but I believe persons being with it are more apt to contract it than persons not with it. It is a disease of filth, therefore everything about the premises where flux is should be kept scrupulously clean. There should be no stagnant marshes in the neighborhood; ponds that cannot be drained should be filled with fresh earth and lime. A few days ago, I learned of cases of flux dying, three in one house, two of them in one day. I went and inquired of the parents about the symptoms. They all had the suppression of urine, with slight and frequent discharges of blood. Before dying they had, like cholera patients, gone into collapse.

If these scattering thoughts serve to get up a profitable discussion, I will be abundantly satisfied.

*Read before Russell Springs Medical Society, August 18, 1908.

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GASTRO ENTERITIS.*

BY L. F. HAMMOND, M.D.,
DUNNVILLE, KY.

This is the form of diarrhea so prevalent in summer. We see more or less of it each season, and often it occurs as an epidemic.

The lesions in the intestines are slight, amounting in most cases only to a superficial catarrhal inflammation, often bearing no relation to the severity of the symptoms, which are mainly due to the absorption of the toxic materials, the result of putrefactive changes in the stomach and intestines. This form of diarrhea may follow closely upon an attack of acute indigestion, in which it very often has its beginning. When the infection is of sufficient intensity and duration it leads to the development of marked structural changes in the intestines, especially in the lower ilium and colon.

Among the causes of acute gastro enteric infection are to be mentioned anything which gives rise to acute indigestion, and anything that predisposes to all forms of diarrheal diseases, age, surroundings, constitution, food and methods of feeding. The most striking thing about these cases is their prevalence in hot weather. While all forms of diarrhea are more frequent in summer, it is this form which is most prevalent, usually occurring in June and continuing until October. There is no doubt that the constitutional depression produced by high atmospheric temperature may seriously interfere with digestion, and sometimes the thirst may lead to giving of too much food, which also may be the cause of indigestion. This is not the cause of the great majority of cases; it certainly is of infectious origin, being caused by some form of bacteria. The germ gains entrance to the body in the great majority of cases through the milk. Water may possibly be the vehicle in a few cases. I doubt they can be taken with the inspired air.

*Read before the Russell Springs Medical Society held at Russell Springs, Ky., August 13 and 14, 1903.

The lesions consist chiefly of a superficial catarrh, mostly in the stomach, lower ileum and colon, though the whole intestinal tract may be affected.

There are two distinct forms of gastro-enteric infection. The simple form and true cholera infantum. The simple form is the one that I will consider in this paper. There are seen in infants mild cases with gradual onset, little or no fever and no gastric disturbances, and severe cases with sudden onset, usually attended by high temperature and vomiting. In the mild form there may be for the first few days no symptoms except the diarrheal discharge, or the child may be fretful, especially at night. Such cases are often allowed to go on for several days without treatment. The stools gradually become more frequent, and are thin, green, yellow or brown, and contain undigested food. Usually the stools become very offensive and mucus is present, the appetite is usually impaired and may be lost entirely, the tongue is coated, and in very young infants the mouth may be covered with thrush, the infant become pale, the limbs grow soft and flabby, and lose flesh rapidly. With proper treatment, there is noticed in favorable cases an improvement in the character and frequency of the stools, the appetite returns and the child recovers after an illness of from one to three weeks, but may last much longer. In cases developing suddenly the picture is very different. The attack may begin abruptly in a child previously healthy, or there may be for some days slight intestinal disturbance, the skin is hot and dry, and the temperature rises rapidly to 102° or 103°, and often to 105°. The infant may lie in a dull stupor, with eyes sunken, weak pulse and general relaxation, or it may be restless, with excitement, and even convulsions. There is great thirst, and in a very short time vomiting sets in; diarrhea soon follows. The stools often do not differ from those of an ordinary intestinal indigestion, the most character-

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istic features are the amount of gas expelled, colicky pains preceding the discharges and the foul odor which usually continues.

Simple cases of gastro-enteric infection do not often prove fatal, except in very young infants, or those that are very delicate. This class of patients are very often overcome in the first stage, and even apparently mild attacks may prove fatal.

The treatment is three-fold: First, hygienic; second, dietetic, and, third, medicinal.

As to the hygienic treatment, they should have plenty of fresh air and should be kept out of doors a good part of the day; they should be kept quiet; the clothing should be light; bathing is very useful and usually pleasant to the child; it allays the restlessness, keeps the skin active and reduces the temperature; the napkins should be removed as soon as soiled.

Dietetic treatment: Food of all kinds should be withheld for several hours, and give the stomach absolute rest, often 12 to 24 hours, and then you should give food cautiously; if you suspect something wrong with the milk, if the child is nursing the breast, you should advise artificial feeding, preferably good, fresh cow's milk, or, if not convenient, some of the malted foods may be given. Solid food should not be allowed for several days after the stools become normal.

Medicinal treatment: As we are not treating an inflammation of the stomach or intestines, our therapeutic measures are to be directed against the acute indigestion and the putrefaction in the alimentary canal. First, you should evacuate the stomach and intestines as early and thoroughly as possible by some cathartic; I prefer calomel. You will often get good results by irrigating the colon after the bowels have been evacuated.

You may place the child on bismuth, salol, solacylate of soda or some other antiseptic, whichever you prefer; and in connection with this I use pepsin in some form, given in large doses, which I think is very beneficial.

Opium in some form is usually of great benefit, but should not be given till the bowels are thoroughly emptied; but you should use it with caution so as not to produce stupors, and you should consider the uncertainty of absorption. Morphine hypodermically is the safest, but we should remember that we must treat the patient and not direct all our thoughts to the acid or alkaline stools or bacteria, but should treat the symptoms as they arise.

Society Proceedings.

[Reported by E. A. Forbes.]

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Friday. September 11, 1903, with Dr. Ben Carlos Frazier, President, in the Chair.

A QUESTION OF DIAGNOSIS.

Dr. S. G. Dabney: I have a case which I did not intend to report tonight, as I meant to give a more thorough report later. It is a question of diagnosis in my own mind. I saw, in consultation, a lady seventy years of age in June with acute suppuration of the middle ear; I took her to the hospital and opened up the drum the next day. About ten days later I saw her again in consultation when she had developed symptoms of mastoid disease; I used cold applications over the mastoid and other usual methods, but the symptoms persisted for a week or two. She returned to the hospital and I opened up the mastoid and got pus. Preceding any symptoms of mastoid trouble she had two boils, but no attention was paid to them at the time; she had no fever, or very little, up to this time. Otherwise she had all the usual mastoid symptoms. The operation was complete. I went into the mastoid antrum and washed it out with antiseptic fluid, which came out through the drum membrane. She continued to

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complain of pain and I gave her some morphin. She went along for the next two weeks with more pain, but no other symptoms. At the end of two weeks the fever came on, running up in the evening to 101°, and on Saturday night the nurse telephoned me it was 103½° and that she had pain in the chest. Her family physician was then out of the city, so I took Dr. Leavell to see her, but he could not find any cause for the fever outside of the trouble in the head. The wound was doing very well and the drum membrane had healed. She had headache on that side, fever up to 103½°, and some tenderness on that side which made me think there was pus. So I made a second operation on the mastoid, a radical one, throwing the middle ear and the mastoid antrum and the auditory canal into one cavity (I think I injured the facial nerve in the operation), but I found no pus. I did not lay bare the lateral sinus and possibly I may have erred in not doing so. Her fever ran down for a day or two, which, I think, was due to the hemorrhage, but within a few days it began running up again. She had some boils on her body, which had continued from the first. Her headache disappeared, the second mastoid opening healed up pretty well and she had no tenderness, but she had a good deal of sweating, and her temperature was up to 102½° in the evening. The temperature became constant, and the symptoms partook of an abdominal character and she was troubled with distension and tenderness over the abdomen. She died night before last without any head symptoms. Now, the question in my mind is, was it a complication of the mastoid disease, or a thrombosis of the lateral sinus, or did she develop some other independent trouble? It appears to me that she died of some other disease, though two or three physicians were unable to diagnose it. I believe her trouble began with this fever, two weeks after the first operation, and that it was probably due to some abdominal disease. I believe she got more morphin than she ought to have had. She had had the boils before the ear trouble started, so they can hardly indicate pyemia. The urine was markedly albuminous towards the last, but there was no sugar; I think there were some tube casts. There was no disturbance of intellect, and no rigors, and no sudden rise or fall of temperature. I confess that when I hear a surgeon report a fatal case and say that death was due to some other disease, I feel a little skeptical, and I feel that way in this case. Yet I cannot make anything else out of it. The distension of the bowel seemed to be gaseous; there was no diarrhea.

DISCUSSION.

DR. WM. CHEATHAM: I do not see how anything could have been left after the second operation. I cannot say anything to clear it up.

DR. BEN CARLOS FRAZIER: I saw this case at the second operation. She was a fairly well nourished woman, vessels pretty hard, but circulation good. Dr. Dabney explored the field a great deal and went wide enough, it seemed to me, to find anything. I saw her but this one time. She was an old German lady who did not speak English, and I could not understand her German very well. She did not seem to be wide awake in answering questions, but this may have been due to difficulty in understanding the question. She took the anesthetic very well and went off the table in good condition. I do not know what she had.

FORTY TONSILLOTOMIES IN FIFTY MINUTES.

DR. WM. CHEATHAM: I just want to put on record some tonsillotomies. Last Thursday I went out to the Presbyterian Orphans' Home at Anchorage and removed forty tonsils in fifty minutes. I had seen seven of these patients in the office, but had not examined the other thirteen. There were eighteen or nineteen tonsils in the seven. I cocainized them and used adrenalin and tannic and gallic acid.

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I have not heard of anything going wrong since. I used the same instrument in all of them, washing it in hot water and alcohol. I use the forceps with one or two, but curetted most of the pharyngeal growth.

DISCUSSION.

Dr. J. M. Ray: I think I saw sixty-three patients operated on one afternoon by two different men.

Dr. S. G. Dabney: Dr. Cheatham is to be congratulated on his very rapid work, but while I think such rapidity may be advisable under some circumstances, it is not generally so and would appear to have some disadvantages. In regard to the injection of adrenalin, I think the chances of secondary hemorrhage would be greater and I would be afraid to have patients in the country miles away after using it.

Dr. William Cheatham: I do not think adrenalin increases the danger of secondary hemorrhage.

Dr. S. G. Dabney: Dr. White, of Richmond, was very positive about the increased danger. I have not had any experience in this line, as I am in the habit of plugging the nostrils, but anything that acts upon muscular tissue and causes it to contract is apt to be followed by relaxation. A great deal depends upon the age of the patient.

ANOMALY OF MENSTRUATION.

Dr. Ben Allen: A little girl 7 years of age was brought to my office by her mother four months ago with a history of having had a prolonged flow about which the mother seemed to be disturbed. The girl was well developed for her age, but not overly so, and I was at a loss to know just what to do. Any effort at examination was resisted by the child. Day before yesterday the mother told me the child still menstruated regularly every twenty-eight days; the flow is of that peculiar character and is not excessive.

DISCUSSION.

Dr. J. G. Cecil: I think this is one of the anomalies we meet with occasionally. Two or three times I have seen discharges from female babies that would run four or five days and cease. I have never seen a case in which any alarm was occasioned by this flow or where it was necessary to do anything for it. If this seems to be a normal flow and the child is not suffering in any way to indicate trouble, I do not see why any investigation should be made, and I would let it alone. It is very unusual for a child of that age to menstruate regularly.

Dr. Florence Brandeis: I endorse what Dr. Cecil has said.

Dr. Louis Frank: We know that these anomalies do sometimes occur. I think Lusk mentions a case in a child younger than this which menstruated regularly. There is a report of one child which began menstruating in the second year, and became a mother at 10 or 12 years of age. There are a number of such cases on record, but they are unusual enough to be of interest to the Society. I see nothing to be done, but to let it alone.

ERYSIPELAS.

Dr. John G. Cecil: I rise to ask for information on account of an experience I have recently had with a case of erysipelas, and to inquire if any members of the Society have had any similar experience. This was a typical case of erysipelas, starting from a bruise on the ear, in the person of a lady with uric acid diathesis, but without history of any previous attacks of erysipelas. She was taken sick while visiting in the country, and was brought home, with a temperature of 102° and all the usual symptoms. The disease spread rapidly over the face, and when I first saw her it had invaded the mouth and covered all that side of the head. I painted it over with a 10 per cent. solution of ichthyol in collodion, and while it did not seem to control the spread at first, it limited it, and it ran an unusually short course of five or six days. This was so unusual to me that I raise the question as to whether the

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treatment had anything to do with the rapid recovery. My opinion has always been that erysipelas is a self-limited disease. In this case the only other medicine used was the old-fashioned treatment of chloride of iron and some quinine, with attention to the functions of the body. I was astonished that a case starting out so actively recovered so quickly; it did not spread on the neck at all, and the fever abated in four days. Most of the cases I have seen ran two or three weeks, and spread over a great part of the body.

DISCUSSION.

Dr. S. G. Dabney: I will relate my personal experience with erysipelas. One day I was treating a patient who had developed erysipelas after mastoid operation and I had an abrasion on my ear. I noticed afterward that my face got a little red and began to feel feverish. Dr. George Young, of the Marine Hospital, saw me and said I had erysipelas. He said he saw a great deal of it and suggested the application of pure ichthyol. I got some at once and he put it on. All that afternoon I had a temperature of 103° or 104°, and the swelling had invaded all the area around the ear. Dr. Leavell repeated the application of ichthyol and antiphlogistine daily and I was well in five or six days. I had another attack about ten days later, affecting the same area, but it yielded to the same treatment inside of a week. Dr. Mathews thought I must be mistaken about the diagnosis, but I believe it was correct. Under the circumstances there could hardly have been an error, as both Dr. Leavell and Dr. Young agreed on this and the history of exposure made it all the more probable.

Dr. C. Skinner: I never could get any results from applications of so-called specifics in erysipelas. I have had good results from the application of cold carbolized compresses over the face, keeping them wet.

Dr. Frank Simpson: I had a great deal of experience with erysipelas a few years ago in connection with my father-in-law. Nothing did him any good. He had it for three or four winters and it always commenced in the nose. I tried ichthyol in a 15 or 20 per cent. ointment, but carbolized glycerine was the best thing I tried. It would recur at just the same time each year, along in November, and ran the same course.

Dr. Wm. Cheatham: I thought carbolic acid was the best treatment for erysipelas.

Dr. Florence Brandeis: I have used ichthyol for erysipelas, in varying strengths from 10 to 25 per cent. I recall one case in my first year's practice in which it returned at the end of three weeks and ran the same course.

Dr. B. C. Frazier: The only thing about Dr. Cecil's case that surprises me is that he got results from such a weak solution. I have never used ichthyol in less than a 50 per cent. ointment, the other half being vaseline. I have had two cases this summer, neither running over four or five days, both very bad cases. I think ichthyol is almost a specific for erysipelas. I have never used it pure. I do not see any good the collodion could do, unless it keeps it there better.

Dr. Louis Frank: My experience has been the same. The last case I saw yielded to treatment in four or five days. I must have gotten the idea abroad, but it has been my custom to use ichthyol in all cases in private practice. One of the first cases I saw was in the country, and it was one of the worst cases I have seen. The patient was not sick more than six or seven days; I think I made four or five visits. I have used ichthyol in 50 per cent. ointment, applied thickly over the part on cloth. I do not believe it is a self-limited disease at all, but one due to bacterial infection, and if we can find an agent that will penetrate the skin deeply enough, it will stop the growth. Probably the benefit from the collodion comes from its constricting the lymph spaces about the edge of the affected area. The good resulting from the ap-

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plication of ichthyol arises from its antiseptic effect, and we might get the same result from bichloride and carbolic acid, if we could apply them in sufficient strength. I believe constitutional treatment does little good beyond keeping up the resistance.

Dr. J. G. Cecil: I am obliged to the Society for the discussion, for I feel that it has been worth while to make the report. It confirms me in the use of this treatment, which I shall adopt for the future. The only thing the lady objected to was the discoloration. I have never believed very much in any kind of treatment for erysipelas other than supportive, because I thought it a self-limited disease. Not long ago it was recommended to inject carbolic acid under the skin beyond the affected area, in the hope of counteracting the action of the bacteria, but I could never see the advisability of that. In this case, I was in doubt as to whether it would have been a mild case after all, and I am glad to know that there is a prospect of limiting this disease, for my experience has been that it always ran its usual course, independent of treatment. One of the last cases I had started from a vaccination, and the man was sick for at least three weeks; it was absolutely uninfluenced by any form of treatment.

Essay by Dr. Louis Frank, entitled, "Plea for Better Diagnosis in Diseases of the Upper Abdomen." (See October issue, page 178.)

DISCUSSION.

Dr. T. Hunt Stucky: I know all of us have been interested in the excellent paper, and there is so much to talk about that it is difficult to know where to commence. Every general practitioner recalls many cases of so-called chronic indigestion that he wishes some surgeon had operated upon and performed a gastro-enterostomy. I have been more and more inclined to the belief that chronic gastric ulcer prevails more than we have been accustomed to suppose. Where there is the simple presence of blood brought up by emesis, unless it is persistent and accompanied by pain, I think it is due to acute hyperemia, and not to an ulcer which has permeated the middle coat of the stomach. In the last year or two I have been less and less inclined to use the so-called digestants, such as pepsin, in the treatment of these conditions. I rely more upon gastric lavage, with rest of the stomach and recto-alimentation. I have in mind now a case of chronic gastric ulcer, suspected to be malignant in character, in which there has been marked diminution in the induration as a result of this plan.

As to gall-stones, it has been my rule not to call in a surgeon unless there were evidences of jaundice or obstruction. I have in mind an old lady who has had what was supposed to be hepatic colic, and who has had five or six attacks in the last three or four weeks. There has been an absence of jaundice; the line of pain is along the common duct, pain referable to the back, pain apparently so severe as to require the administration of chloroform or large doses of morphine. As there was no cessation of the pain, I suggested an exploratory operation, but it was declined. I am heartily in favor of exploratory operations and mention this as an instance. Another case I attended in six attacks of what I thought was gall-stone colic and operation was finally consented to. The operation was successfully done and no gall-stones were found, but a number of adhesions were disclosed, binding down the common duct and constricting the neck of the gall-bladder. The operation afforded complete relief and there has been no subsequent attack.

Dr. F. C. Wilson: The general practitioner must first make the diagnosis and then call in a surgeon. I have seen a great deal of gall-stone colic, and I have never been perfectly certain about the diagnosis until the stones were found after careful search. When these are found, it is perfectly clear.

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Then it is a question whether it is absolutely necessary to invite surgical interference; I do not believe that it always is. I can recall a number of instances where the diagnosis was made perfectly clear by the discovery of the stones, and in which appropriate treatment prevented their reformation. In some cases that I recall, ten or fifteen years have elapsed without recurrence. If, however, these attacks do recur with such frequency as to set up inflammation of the gall-bladder, or if evidences of suppuration exist, then surgical interference is imperative. If by careful palpation the stones can be detected, operation is indicated. Many of these may be too large to pass through the ducts, but if the stones are small enough, to pass and have passed and the gall-bladder cannot be recognized as containing a mass of stones, then the surgeon is not urgently needed. Even the removal of all the stones from the gall-bladder does not always relieve the case, for the cause may still exist. The source of these stones, the unhealthy condition of the liver, needs the assistance of the physician to prevent future formation. I have known instances where thorough removal has been done and yet recurrence of all the symptoms has taken place within a few years. Successful operation may lead the patient into a feeling of false security, and we should never leave a case without treatment directed to the betterment of the condition of the bile itself, to lessen the likelihood of future deposit of stones. No one single remedy has given me better results than succinate of iron, and I recall a number of instances where this has led to entire freedom from attacks for ten or fifteen years. In one case a lady had suffered for years under the hands of a homeopathic practitioner who treated her for neuralgia of the stomach. I was called to see her in an emergency for gall-stone colic; afterwards I searched for stones and found a number. I exhibited the collection of stones to this Society. There was never any recurrence of the attacks or any neuralgia of the stomach. I have seen many cases of gastric ulcer relieved by rest of the stomach. I have sometimes fed them by the rectum for ten or twelve days and have seen unmistakable ulcers, due to traumatism or the effect of acids swallowed, in which entire restoration resulted.

I have had no experience with the operative treatment, but I doubt not it would accomplish a great deal in giving the stomach rest.

Dr. B. C. Frazier: Dr. Frank's paper has led me to make up my mind what to write about for the next meeting. I think the question of diagnosis of troubles in the upper abdomen is exceedingly interesting and many points of special importance have been brought out. I shall save what I have to say for next meeting.

Dr. T. Hunt Stucky: I would like to ask Dr. Frank's opinion as to the diagnostic value of the inspector in pancreatic disease.

Dr. Louis Frank: I think it is of great importance, but not in gall-stone disease unless we have obstruction. I believe that there is not so much difficulty in making a diagnosis of gall-stones as the profession generally believes. I believe the mistake is made in trying to verify it by waiting for the jaundice, for we do not want to have the obstruction which causes this jaundice. It will often be followed by cancer. This was illustrated by a case of mine very recently. About two years ago I examined a patient of mine for life insurance, and made a rigid examination, because I suspected that she might have some trouble, but could find absolutely nothing the matter. That patient was brought to me this summer with an intense jaundice, believed to be due to an impacted stone in the common duct. She had never been jaundiced before, and had not been ill, except for the previous six weeks. Close questioning elicited the history of indigestion, to which no importance had

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been attached. I felt convinced that she had cancer, and under chloroform was more than ever convinced. I operated, and found stone in the common duct, and one in the gall-bladder; the liver and everything else was cancerous. I believe it had its origin in the gall-bladder. I think the statistics of Mayo, of Robson, and others, point to the fact that in 90 per cent. of these cases of primary cancer of the gall-bladder and gall ducts, they are preceded by stones in these organs.

I think that Dr. Wilson makes a mistake in waiting to verify his diagnosis by the passage of stone. In all cases where stones are passed, I believe they are passed by a process of ulceration either through the duodenum, or, if attachments become formed, by adhesion either to the duodenum or the small intestine, ulceration takes place, and the stones pass. I recall a case which suffered for two years from constant indigestion, with no jaundice and no symptoms of gall-stones, except her age and the fact that she came from the South of Germany, where gall-stones prevail; pain at Robinson's point led me to make the diagnosis. On operating, it was difficult to find the gall-bladder itself, and when found it was very small and imbedded in a mass of adhesions, in which were impacted three very large stones. She has not had a symptom since. This case was diagnosed on account of the severe pain, emaciation and other symptoms, as cancer.

I do not believe that we can give any medicine to prevent the formation of gall-stones. I do not believe the condition arises from the bile itself, that it does not depend upon the amount of cholesterin, but upon infection. Infect a gall-bladder and then constrict it and you have the formation of stone. I do not see how any drug could affect the bile to such an extent as to prevent stone formation.

As to gastric ulcer, I believe Dr. Stucky's point well taken. Many cases have been reported in which the hemorrhage seemed to come from the entire stomach wall and not from any one point. These cases have all been cured by gastro-enterostomy. Acute gastric ulcer is of little importance except for the part it plays in the formation of chronic ulcer. Rest of the stomach may be all that is necessary, and such cases are not for operation. The cases for operation are the chronic ulcers with recurrent bleeding or those that have gone on to the formation of constrictions or stenosis or involvement of the peritoneum. Monyhan reports a number of cases operated upon during active hemorrhage and perfect health restored where a gastro-enterostomy had been done. I believe a great future is before us in the treatment of diseases of the upper abdomen.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Friday, September 25, 1903, Dr. H. Horace Grant, Vice President, in the Chair.

DERMOID CYSTS OF THE OVARY.

Dr. Turner Anderson: These dermoid cysts of the ovary were removed a short time ago, and the special feature about the case is that I had it under observation for about ten years. The woman was from Indiana, but ten or twelve years ago she lived here, and at that time I made out a tumor of the pelvis, but her condition was so satisfactory that I did not feel it necessary to operate. She is now 36 years of age, and at that time was the mother of a boy about 2 years old, and her health was very good. During the last year her health began to fail, and she suffered from pressure, pain about the bladder and the other symptoms. I advised removal of the tumor, which I suspected to be a dermoid, which it proved to be. It has a considerable amount of hair in it, and not much fluid, and had none of those special characteristics which we find in sebaceous cysts. The appendix was found to be attached to the ovary, and it also was removed. She has gone along very

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nicely. The cyst was punctured before it was removed.

Many years ago I presented an enormous cyst before the Society with hair and teeth in it and a large amount of sebaceous material. That tumor must have been one beginning as a dermoid and coalescing with another, thus getting to be a very large one. A dermoid is generally not very large, scarcely ever larger than the size of the fetal head.

This other tumor I removed four days ago, also taking out the appendix. The patient had been a chronic sufferer for a number of years with chronic ovaritis. I rather suspect that this tumor belongs to the same class as the other. I removed both of these tumors without rupture. The patient is now doing very well.

DISCUSSION.

Dr. J. K. Freeman: I was present at both operations and these dermoid cysts are curious things. They always excite much interest among the laity on account of their containing teeth and hair, and we cannot offer any satisfactory explanation as to how this formation takes place in these localities. As to the second case, this was the first time I had noticed sebaceous material on the inside. I think it is probably a tumor of the same character as the other, though we cannot be sure without a microscopic examination.

Dr. W. O. Roberts: I do not think there can be much question but that the second tumor is also a dermoid. The contents look like it to me. The doctor stated that dermoids grow very slowly and are usually small when removed. I have removed but four dermoid cysts of the ovary and three of these were very large, and all of them had been growing for years before coming under my observation. One very important point in connection with the removal of a dermoid is the care that should be taken to prevent escape of its contents into the abdominal cavity because of its septic properties.

Dr. Ap M. Vance: I have removed quite a number of dermoids. I remember the first case I had was a woman on Twelfth street in which it had ulcerated through the abdominal wall, a woman past 50. The special feature about it was that bones were sticking out of the abdomen above the umbilicus. It bore a decided resemblance to the human face, having a molar and one eye perfect, except the ball, of course. It caused quite a discussion at the time. The fact that they are not of fetal origin is proven by the fact that these same tumors grow in the male in different parts of the body. I remember a woman with inflamed gall-bladder from a tumor lying up under the liver. It was gangrenous and she died of peritonitis.

Dr. Louis Frank: I think these growths are always very interesting. I have removed several, and my experience is that their growth is very slow, though they may take on a very rapid growth as the result of trauma, even that resulting from pregnancy or labor. Most of these rapid dermoids are infected dermoids, and in such case we should use great care in their removal. Otherwise, I do not think there is so much danger from the escape of their contents. Also, a point in the pathology which accounts for the size some of them attain is that frequently a dermoid cyst co-exists with an adenomatous cyst and they continue to grow until the wall between them is broken down and the tumor partakes of a two-fold character. Then the contents are mixed with dermoid material, and without careful examination it might be taken for a pure cyst. The characteristic of a dermoid cyst is that it contains epithelial elements. Their origin is generally believed to be due to displaced epithelial cells, originating in structures derived from the ectoderm. The smallest cyst of this kind that I ever saw was about the size of a hazelnut. The ovary was being removed for pus-tubes, and on section it was found to contain a little ball of

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red hair, though she was a negro. An article by Bandler in a recent number of the *American Journal of Obstetrics* represents a very careful study of the subject, and he believes that they arise from epithelial enclosures during fetal life. Some beautiful specimens of dermoid have been described. They are all of the same type.

Dr. Turner Anderson: I feel like the speakers have emphasized more than the authorities warrant us in believing as to the obnoxious material. Montgomery speaks of the contents of dermoids as exceedingly obnoxious. My attention was attracted to-day to a case in which the tumor ruptured while the patient was being prepared for operation, and she died of septic peritonitis.

Dr. Louis Frank: I said that the contents were innocuous unless they became infected.

SUB-PERITONEAL FIBROID.

Dr. Ap M. Vance: This is a sub-peritoneal fibroid removed from a young woman yesterday morning. The morbid anatomy is interesting. I left one ovary in place, as she is still a young woman. It was a difficult case for operation, as the folds of the broad ligament prevented me from telling where I was. She had knowledge of this tumor for only about a year, though it probably had existed for a longer time. It rested way up in the right iliac fossa, just under the broad ligament. The appendix was on top of the tumor and it was the first thing I saw.

DISCUSSION.

Dr. Louis Frank: This is a very beautiful specimen and the tumor is of a character not often seen. We see a great many of the sub-serous fibroids, but not of those which are developed between the folds of the broad ligament. We rarely find that the attachment to the uterus has been completely separated. They seem to partake of the sub-peritoneal type and the muscular wall upon the distal side is very much thinned. I think a discussion of the method of handling these tumors would be of interest. It was wise to have left one ovary in place.

Dr. Ap M. Vance: I think I have exhibited three of these tumors which were separated from the uterus. In five or six cases I have had demonstrated to me the utility of leaving in at least a part of one ovary. I have never had any occasion to do anything afterward with the ovary left behind.

The essay of the evening was read by Dr. Ben Carlos Frazier, entitled, "Cancer of the Stomach." (See page 205.)

DISCUSSION.

Dr. J. G. Cecil: Dr. Frazier has emphasized the part of special interest —the difficulty of early diagnosis. It has been my fortune to see very few cases, and the difficulty of diagnosing it early have been so great that I have been slow, indeed, to make a diagnosis. When I suspect a case of being cancer of the stomach, I try to eliminate everything else, and after that there is always some doubt in my mind until the symptoms become unmistakable. As he truthfully says, the diagnosis is usually made too late for surgical interference with a prospect of relief. The outlook, from a surgical standpoint, is not very bright nor encouraging. If I were the unfortunate subject of the disease, I would want my friends to give me anodynes and let me die in peace.

With reference to the first case reported, I am inclined to question his diagnosis. He admits that he questions them all a little. The fact that she was only 24 years old, and a female, would make me think it a case of gastric ulcer. The only thing that would lead me to question this is the presence of the tumor. An ulcer, lasting three or four months, near the point of perforation, could produce a circumscribed inflammation which simulated a tumor.

Dr. W. O. Roberts: I do not believe in any operative interference in cancer of the stomach, as the best that can be

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expected from any operation is a very temporary respite.

Dr. Ap M. Vance: It has never been my fortune to see a case of cancer of the stomach on which I felt like doing a section. All of mine have been old people beyond surgical interference. In our community it would be difficult to get the consent of the patient early enough to do any good, for we have not yet got the control of our people well enough for that.

As to anastomosis, I have never taken to that very much because it is only palliation. Whenever we have carcinoma there it gives only a very short lease on life. If any operation is done on the pylorus, it ought to be a radical one, but to leave the cancer and switch the food off is a tremendous undertaking with promise of very little good. I would be very chary of doing such operations. As I grow older I grow more conservative, and I feel like letting people take care of themselves when they get beyond help.

Dr. Louis Frank: I will discuss the paper and the discussion. I agree with Dr. Vance in a way, and also disagree. I have had no case of this kind, but I still have some very decided opinions as to what I would like best to have done if I had carcinoma of the stomach myself. I do not believe it is a question of saving life or of prolonging life for a few months, but one of making the patient more comfortable and removing the symptom of starvation, which is the worst symptom. We know that we can do this, and I do not believe the operation is so dangerous as it has been represented. The mortality of gastro-enterostomy should not be large, smaller than a good many other operations in condition not so bad as this. Very often the question comes up as to whether it would not be well from other standpoints to prolong a man's life, even for a few months. We seldom see these cases until we know little can be hoped for, and to help a man wind up his business affairs by giving him four or five months of life and relieving him of these distressing symptoms is a matter not to be lost sight of. I think that as an operation of convenience it is justifiable.

I believe that we would make our diagnosis earlier if we would examine these patients more frequently. We should examine every patient complaining of gastric disturbances. Our greatest field for work now is in the upper abdomen, and I believe many die from so-called cancer of the stomach which are simply chronic ulcers causing localized peritonitis, or ulceration following the healing of old sores. I think Dr. Frazier's first case a typical one of chronic ulceration and such cases as these have been relieved by gastro-enterectomy. The formation of an anastomosis has relieved these cases completely, and I do not see why it should not be done. I believe we should insist on stomach analyses. We recognize the fact that there are a great many difficulties in early diagnosis of gastric carcinoma, but if the gastric symptoms are such as to lead us to suspect it, we are justified in doing an exploratory operation. There is everything to be gained and nothing to be lost, and I do not think we should hesitate a moment.

Dr. T. Hunt Stucky: I have been very much interested in the paper. In the first place, what early means have we for diagnosis of cancer of the stomach? We have been taught that absence of hydrochloric acid in the secretions of the stomach is absolutely indicative of cancer, but in the last few years the researches of investigators have proven this to be absolutely false. In chronic dilatation, in atony of the walls of the stomach and in chronic gastritis we have absence of hydrochloric acid. Then what have we to gain by analysis of the stomach contents as an aid to diagnosis of cancer? If these conclusions be true, and there is every reason to believe they are, analysis of the stomach contents in the early stages of cancer would be absolutely futile. I believe with Dr. Frank that many of the so-called cases of cancer of the

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stomach are due simply to thickening of the walls as a result of chronic ulceration. If we were more careful in our examination of the gastric contents, in the blood examination, and in regarding the decrease in weight of the patient, we would be better able to make a prospective diagnosis rather than a positive one. I almost feel like saying, "What is the use?" when we speak of diagnosis of cancer of the stomach. I am like Dr. Cecil: If I have cancer of the stomach, just make me comfortable and let me die easier; no gastro-enterostomy for me.

Dr. H. Horace Grant: What little experience I have had with cancer of the stomach leads me to dissent from most of the discussion as to treatment. I think it is a mistake to discuss any method of treatment as belonging only to this condition and from our own individual experience, especially if that experience be small. The more experience we have the better results we can give to our patients in any treatment or operation. Those who have seen large numbers of cases of cancer of the stomach have had such success in operative steps as to lead them to continue operating, and I think we ought to do all we can to encourage what is successful at home and abroad. For this reason and those advanced by the essayist, when the diagnosis is difficult or even impossible, if we have reasonable ground for suspecting cancer of the stomach, we should make an exploratory operation, but with the understanding that if conditions justify gastro-enterostomy or pylorectomy we are prepared to perform it. There is no use in making an exploratory operation if nothing is done when the disease is found. Not only would a great many lives be prolonged by these procedures but some would be saved. If the delay which necessarily follows the expectant plan be allowed to go on, operation at a later stage promises almost nothing. The reasons given by Dr. Frank for prolonging life for even a month or two will not serve us, for if it is to be but for that brief period, we had better let the patient alone. But in the early stage it seems to me that exploration to determine the nature of the lesion is imperative.

I have had but little experience. One case in which there was some doubt as to the diagnosis I presented to this Society before operation. A gastro-enterostomy was made, after which the man lived only seven weeks. The cause of his death, however, was a fault in the operative technique. At the post-mortem it was found that that portion of the intestine between the anastomosis and the pyloric orifice was greatedly distended; this had allowed the fluid to run back through the anastomosis and it was dilated to a size almost as large as my arm. It was not the progress of the growth that brought on death, but interference with nutrition. The operation was done by the posterior method. A puncture was made through the omentum and the intestine was inserted behind the omentum by means of the Murphy button. It was a mistake not to have made a short circuit through which any regurgitation could have been emptied, and while I do not say that the operation would have prolonged life for a great while, the operation itself did not do him any harm. Just as early as we suspect the presence of gastric cancer exploratory operation should be done. The fact that certain death will result if the cancer exists and the prospect of relief if it is found early ought to encourage us a great deal. It is not usually difficult to persuade the patient to submit to operation if the surgeon can confidently recommend the advantages. If we have the courage of our convictions the patient will usually accept them.

Dr. B. C. Frazier: In regard to the first case, the reason I made the diagnosis of cancer of the stomach was on account of the marked cachexia, along with the other symptoms. The first time I saw her I suggested that operation was the only thing to do.

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I doubt very much whether we get correct statistics or not. Every one is very much given to reporting only the good cases. There have been very few cases reported that have been favorable. There are on record forty-three cases that have gone beyond the five-year limit where operation had been done. That is a pretty fair showing.

In regard to the question as to whether we should do anterior or posterior anastomosis, Bevin has only done two cases, and both recovered. One was taken to be a perforating ulcer and found to be cancer; the man had a recurrence at the end of six or seven months. The other case was in a woman between 28 and 30 years of age, and she lived three years. There has been one case reported of a man operated on when past 70 years of age, who had gone on for nearly two years after the operation. I think it depends almost entirely whether the cancer is at the pyloric end or the cardiac end. If it is at the pyloric end, there is greater reason for interference. Most of these patients die of exhaustion or hemorrhage.

One other point that I would like to make, not spoken of in the paper, is the presence of the filiform bacillus due to lactic acid.

Dr. Frank and I have seen a case recently in a woman 60 years of age. She gives a history of frequent vomiting of blood, is quite jaundiced, has a tumor in the epigastrium, and a nodular liver. In the last few weeks she has begun to improve, and it may not be cancer.

Current Literature.

Dorland, W. A. Newman, Philadelphia: Topical Treatment of Gonorrhea in Women. —(*International Medical Magazine.*)

Gonorrheal vaginitis is, and ever has been, the *bete noir* of the gynecologist. Rebellious to treatment, the pharmacopoeia has been ransacked to furnish remedies to control the disease, and not with the best of success. Of all the older medicaments that have been employed, there is but one that has consistently given any degree of satisfaction. Silver nitrate, when applied directly to the spots of active inflammation, has been instrumental in many cases in arresting the progress of the disease. Solutions of the strength of 10 to 15 % have been largely used for this purpose. A few years ago Doderlein and other German gynecologists claimed that by the use of silver nitrate in very strong solutions they could abort an accute gonorrheal vaginitis. Under local or general anesthesia, the vagina was painted from the fornices to the vestibule with the silver salt in a solution of one dram to the ounce. Owing to its severity mainly, this method has not come into general favor.

Probably the best results in chronic cases have followed applications to the vaginal mucosa of trichloracetic acid (1 to 2 %) and methylene-blue (1 %), especially the latter. The painting of the vagina by methylene-blue from the vault to the vestibule, once or twice weekly, has been, in our experience, most prompt in arresting the disease and restoring the character of the mucous membrane. A curious clinical feature associated with this treatment is the rapid decoloration of the painted mucosa. Although of an intense blue-black color at the time of treatment, within twenty-four hours the normal color of the mucous membrane will be restored, and this without any coloration of the vaginal leucorrhea being noted.

Dr. E. L. Trudeau, who has done so much for the cure of tuberculosis by the fresh air and feeding treatment, contributes a most instructive, entertaining and valuable article to the October 24 issue of the *Medical News.* This treatment has saved the life of Trudeau, and he has been able to bring it within the reach of thousands in the thirty years of residence at Saranac Lake.

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Louisville Monthly Journal

OF MEDICINE AND SURGERY.

"Alis Volat Propriis."

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HENRY ENOS TULEY, A.B., M.D., ACTING EDITOR.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

The twenty-ninth annual meeting of the Mississippi Valley Medical Association will pass into history as the most scientifically successful ever held. In point of numbers the meeting was a disappointment, but the smaller sections enabled more satisfactory work to be accomplished. It was demonstrated at this meeting, as at previous ones, how many doctors are willing to come to the meetings, take advantage of the reduction in railroad rates, take part often in the proceedings and in the social features, save to those to which tickets of admission are required, and refuse to join the Association and pay dues of $3.00.

This meeting may prove epochal with the adoption of the new Constitution and By-Laws, which, if approved by the American Medical Association at Atlantic City, will make it an integral part of that body—a District Branch, the first of several projected in the original draft of the new American Medical Constitution. Its requirements for admission will be those of the American Medical Association, and we trust the affiliation will be a close one.

The social features of the Memphis meeting were all that could have been expected in a Southern city. A notable occasion was the reception and ball at the Gayoso Hotel, a most beautiful hotel, the decorations in the dining-room, in which was served the supper of the entertainment, were the most beautiful and effective it has been our pleasure to see. This, as a setting to the beautiful women of Memphis, made a sight which will always be remembered by those in attendance.

Dr. John L. Jelks and his efficient Committee of Arrangements did most excellent work in dispensing typical Southern hospitality.

STATUS LYMPHÁTICUS AS A CAUSE OF SUDDEN DEATH.

Most authorities recognize the probable connection which enlarged thymus bears to sudden death in children, and a confirmation of this theory will be received with interest by the profession. Blumer (*Johns Hopkins Hospital Bulletin*, October, 1903) considers this subject in detail as it relates to spontaneous sudden death, cases of death under anesthesia, and death during infectious diseases.

While the clinical picture varies in different cases, the immediate causes of death are probably only two, cardiac paralysis and asphyxia. Each of these varieties the writer illustrates by clinical cases.

The pathological anatomy consists of a hyperplasia of the thymus gland, and of the lymphatic tissue of the body in general. There is also a hypoplasia of the vascular system, noted particularly in children nearing puberty.

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The writer suggests the theory that the condition which is present in status lymphaticus is one of lymphotoxemia, and concludes:

1. The condition known as the status lymphaticus is a definite pathological entity.

2. It is probably associated with, if not due to, a condition of intermittent lymphotoxemia.

3. It may be associated with sudden death, probably as a result of lymphotoxemia alone in some cases, or as a result of the action of toxic, physical, or psychic injuries, which are rendered much more powerful than usual by the predisposing action of the lymphotoxemia.

4. In some cases the sudden death is undoubtedly mechanical and due to asphyxia from pressure of the enlarged thymus on the trachea.

5. The subjects of the status lymphaticus can be recognized clinically in some instances.

TETANUS—IMPERFECT SIGHT AND HEARING.

Two important resolutions were passed by the Mississippi Valley Medical Association at Memphis. The first is as follows and relates to the alarming prevalence of tetanus:

WHEREAS, In view of the fact that more than 400 deaths from tetanus occurred following the 4th of July celebration of 1903, as shown by the statistical report elaborated by Dr. S. C. Stanton, of Chicago, and published in the *Journal* of the American Medical Association of August 29, 1903, the great majority of which might have been prevented had proper precautions been taken; therefore, be it

Resolved, That the conclusions which follow, as offered by Dr. Stanton in a paper presented before the Association, at the above meeting, be endorsed as the sense of the Association; and further be it

Resolved, That the Secretary be instructed to forward a copy of these resolutions and conclusions to the Medical Press, Associated Press, and the Secretaries of the several State Medical Societies, with the request that they publish same and take suitable action thereon.

1. Enforcement of existing laws regarding the sale of toy pistols and other dangerous toys.

2. Enactment of laws by the nation, States and municipalities prohibiting the manufacture and sale of toy pistols, blank cartridges, dynamite canes and caps, cannon crackers, etc.

3. Open treatment of all wounds, however insignificent, in which from the nature or environments there is any risk of tetanus.

4. Immediate use of tetanus antitoxin in all cases of Fourth-of-July wounds, or wounds received in barnyard, gardens, or other places where tetanus infection is likely to occur.

5. As a forlorn hope, the injection of tetanus antitoxin after tetanus symptoms have appeared.

The second was introduced at the request of Dr. Frank Allport, of Chicago, and is as follows:

WHEREAS, The value of perfect sight and hearing is not fully appreciated by educators, and neglect of the delicate organs of vision and hearing often leads to disease of these structures; therefore, be it

Resolved, That it is the sense of the Mississippi Valley Medical Association that measures be taken by boards of health, boards of education and school authorities, and, where possible, legis-

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lation be secured looking to the examination of eyes and ears of all school children, that disease in its incipiency may be discovered and corrected.

The value of these resolutions are patent to all, and it is hoped the members of the medical profession will lend their aid to the passage of this much-needed legislation.

Notes.

Dr. Ellis Duncan has opened an office in Masonic Temple building.

Dr. Elanor A. Harthill has removed her office to 1701 First street, and has fitted up a limited number of rooms for the care of obstetrical cases.

The October issue of the *International Journal of Surgery* was devoted exclusively to Radio Therapy, and is a most valuable and interesting number.

The Board of Public Safety has appointed Mr. Julius C. Vogt as Superintendent of the City Hospital, vice Dr. Ellis Duncan, removed. Mr. Vogt has conducted a drug store at First and Jefferson streets for years, and is a business man of integrity. Mrs. Vogt has been appointed as Matron, vice Mrs. Dr. Barbour, at a salary of $20 per month. Miss Ziegler has been appointed Superintendent of Nurses, vice Miss Alice M. Gaggs, removed.

The Saalfield Publishing Company will shortly issue a series of books, entitled the Doctor's recreation Series, which will undoubtedly prove of great interest to the medical profession. The editor of the series is Chas. Wells Moulton, Buffalo, with the following associate editors: Drs. Nicholas Senn, Chicago; Wm. Henry Drummond, Montreal; John C. Hemmeter, Baltimore; Wm. Warren Potter, Buffalo; Titus M. Coan, New York; Emory Lanphear, St. Louis; A. Vander Veer, Albany; Winslow Anderson, San Francisco; W. J. Bell, St. Joseph, Mo., Henry W. Roby, Topeka, Kas. Among the authors is Dr. Samuel W. Kelly, of Cleveland, for a number of years editor of the *Cleveland Medical Gazette*, who has prepared Volume III., entitled "In the Year 1800," it being a relation of sundry events occurring in the life of Dr. Jonathan Brush during that year. The friends of Dr. Kelly expect much of this work. Fiction is new to the doctor, but we are sure it will be handled in a way eminently satisfactory to all.

County Societies.

JEFFERSON COUNTY MEDICAL SOCIETY.

The fourth regular meeting of the Jefferson County Medical Society was held at the Galt House, Tuesday, October 20, with an afternoon and night session, the President, Dr. Wm. Bailey, in the Chair.

After the regular business of the Society, Dr. Ap Morgan Vance reported a case of placenta previa with central implantation, exhibiting the specimen, which was treated by dilatation and podalic version, death of fetus and recovery of mother.

Dr. W. O. Roberts read a paper, entitled "Intestinal Obstruction from Gall-stones," which was discussed by Drs. J. H. Peak, G. A. Hendon and Aug. Schachner.

Dr. Edw. Speidel read a paper, entitled "Asphyxia Neonatrum," which was discussed by Drs. Elanor A. Harthill, Chas. Moir, O. A. Kennedy and Florence Brandeis.

At the evening session Dr. Irvin Abell reported a case of inverted uterus, which was discussed by Dr. Jno. G. Cecil.

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Dr. T. C. Evans reported a case of laryngeal papillomata.

Dr. P. F. Barbour read a paper, entitled "Influenza in Children," the discussion being led by Drs. Henry E. Tuley, Ewing Marshall and C. C. Godshaw.

Dr. I. N. Bloom read the concluding paper of the evening, entitled "Prognosis in Syphilis." (See page 221.)

The other papers read at this meeting will be published in the next issue of the MONTHLY.

Book Reviews.

The Practice of Obstetrics. Designed for the use of Students and Practitioners of Medicine.

By J. Clifton Edgar, Professor of Obstetrics and Clinical Midwifery in the Cornell University Medical College, etc. With 1,221 illustrations. Cloth, $6.00. Philadelphia. R. Blakeston's Son & Co. 1903.

This is the most pretentious volume upon obstetrics we have had the pleasure of reviewing. The large number and the uniform excellence of the illustrations attracts the attention of the reader at once, there being no text-book, perhaps, which so demands the illustration for a proper understanding of even an unusually lucid text-book as the one upon obstetrics.

At a glance, also, the reader knows the book has been written by a clinician of close observation and wide experience.

The subject is originally divided, as follows: I. The Physiology of the Female Genital Organs; II. Physiological Pregnancy; III. Pathological Pregnancy; IV. Physiological Labor; V. Pathological Labor; VI. Physiological Puerperium; VII. Pathological Puerperium; VIII. The Physiology of the Newly Born; IX. The Pathology of the Newly Born; X. Obstetric Surgery.

The whole subject has been so thoroughly considered in every detail that it would be invidious to take them up seriatim. It is decidedly the most thorough work we have had the pleasure of reviewing, and no practitioner can afford to be without a copy.

A Manual of the Diseases of the Eye. For Students and General Practitioners.

By Charles H. May, M.D., Chief of Cllinic and Instructor in Ophthalmology, College of Physicians and Surgeons, New York; Ophthalmic Surgeon to the French Hospital, New York, etc. Third edition, revised, with 275 original illustrations. New York. Wm. Wood & Co. 1903.

The author has struck the keynote in his preface, by saying "the great difficulty in preparing a book of this sort is to say enough, but not too much." He has succeeded admirably. As a means for supplying a foundation for a wider and deeper study the book is excellently adapted. But few changes have been made in the book over former editions.

Laboratory Guide in Urinalysis and Toxicology.

By R. A. Witthaus, A.M., M.D., Professor of Chemistry, Physics and Toxicology in the Medical Department of Cornell University; Member American Chemical Society. Fifth edition. New York. Wm. Wood & Co. 1903.

This little book has been arranged for the laboratory worker in a most convenient form, with alternate pages blank for note taking, the backbone of the book being at the top. The book includes a thorough course in medical chemistry, urinalysis and toxicology, and is liberally illustrated.

Clean Milk.

By S. D. Belcher, M.D., Research Worker in the Rockefeller Institute for Medical Research; attached to the Laboratory of Department of Health of the City of New York. With an Inntroduction by Wm. Hallock Park, M.D., Professor of Bacteriology and Hygiene in the University and Bellevue Hospital Medical College, etc. New York. The Hardy Publishing Co. 1903.

There certainly can be no more important work than this, of disseminating knowledge, of a not too technical character, which can reach the producer of so necessary an article, but one so capable of working so much harm as milk.

The author, in this book, has treated his subject, Clean Milk, in a most scientific manner, discussing in detail all possible sources of contamination, and giving accurate methods for their correction. The book could well be

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placed in the hands of physicians, that they could familiarize themselves with the possibilities found in milk for a source of infection and trouble for infants and the sick. The dairyman will find it eminently useful in explaining the *why* for the minutiæ of milk production, handling and transportation. The book is an excellent one, and should have a wide distribution and sale.

THE MEDICAL EPITOME SERIES.

Physics and Inorganic Chemistry. A Manual for Students and Practitioners.

By Alexius McGlannan, M.D., Associate Professor of Physiological Chemistry, Instructor in Clinical Laboratory, College of Physicians and Surgeons, Baltimore, Md. Series edited by V. C. Pedersen, A.M., M.D., Instructor in Surgery and Anesthetist, New York Polyclinic, etc., etc. Lea Bros. & Co. New York and Philadelphia. 1903.

This book is of such a nature as to be of little service to any one but a student or practitioner who wishes to "brush up" on the minutiæ of the subject. It is a *multum in parvo*, so much material having been crowded into so little space.

Progressive Medicine.

Volume III. September, 1903. Diseases of the Thorax and Its Viscera; Dermatology and Syphilis; Diseases of the Nervous System and Obstetrics. Lea Bros. & Co. Philadelphia.

The contributors to this volume are Dr. Wm. Ewart, Wm. S. Gottheil, Richard C. Norris and William G. Spiller. Too many commendatory notices of this series have been made in the past to necessitate it repetition here. The series are deservedly popular and upon this high plane cannot help but keep the position with the profession they now occupy.

Physical Diagnosis.

By Richard C. Cabot, M.D., Physician to Out Patients, Massachusetts General Hospital; Assistant in Clinical Medicine, Harvard Medical School. Second Revised Edition, with 147 illustrations. New York. Wm. Wood & Co. 1903.

This book is thoroughly up to date, and, while written for the student, can well be consulted by the practitioner who is lax in his diagnostic methods. We are impressed by the value to the diagnostician of the X-ray in the differentiation of various diseases of the chest.

The illustrations throughout are very helpful, especially those depicting the variety of shapes of the chest.

The frequent use of the chart showing chest outline for recording pathologic findings is to be commended. Their use by physicians generally in their history taking would be a step in advance. The book is all that could be desired.

The Principles and Practice of Hydrotherapy. A guide to the Application of Wator in Disease. For Students and Practitioners of Medicine.

By Simon Baruch, M.D., Professor of Hydrotherapeutics in the New York Post-Graduate Medical School and Hospital, etc., etc. Second edition, with numerous illustrations. New York. Wm. Wood & Co. 1903.

The name Baruch has long been synonymous for the best that is in this method of treatment. Precision and carefulness in its application has been insisted upon in all his writings; it is in this book. It is written from the standpoint of the needs of the general practitioner who has great difficulty in applying these methods in private practice.

Nothing but commendatory remarks could be made if this notice were continued indefinitely. It is a pioneer book, well written and well worth reading and digesting.

The American Pocket Medical Dictionary.

Edited by W. A. Newman Dorland, M.D., Assistant Obstetritian to the Hospital of the University of Pennsylvania. Containing the pronunciation and definition of the principal words used in medicine and kindred sciences, with 566 pages add 64 extensive tables. Fourth revised edition, greatly enlarged. Philadelphia, New York, London. W. B. Saunders & Co. 1903. Flexible letters, with gold edges, $1.00 net; with thumb index, $1.25 net.

From the beginning this little book has had a distinct place, which has not been filled before or since. It contains a vast number of terms, and is a

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most useful book for students and practitioners. Like the larger dictionary, it contains a great number of tables and charts which are of use to the student. Printed on thin yet not transparent paper, it occupies little space in one's pocket.

The Practical Medicine Series of Year Books.

Volume VIII. Materia Medica and Therapeutics, Dr. Geo. F. Butler; Preventive Medicine, Dr. Henry B. Favill; Climatology, Dr. Norman Bridge; Suggestive Therapeutics, Dr. Daniel R. Brower; Forensic Medicine, Dr. Harold N. Moyer. July. 1903. Chicago. The Year Book Publishers.

The scope of this issue of the valuable series of year books is included in the title. The X-rays, specific Medication in form of therapy, and an effort to obtain a more definite standard for drugs, have occupied the department of Materia Medica. In Preventive Medicine, the infectious diseases, tuberculosis, typhoid, mosquitoes, small-pox, school life, are considered.

The Practical Application of the Roentgen Rays in Therapeutics and Diagnosis.

By William Allen Pusey, A.M., M.D., Professor of Dermatology in the University of Illinois; and Eugene W. Caldwell, B.S., Director of the Edward N. Gibbs X-Ray Memorial Laboratory of the University and Bellevue Hospital Medical College, New York. Handsome octavo volume of 591 pages, with 180 illustrations, nearly all clinical. W. B. Saunders & Co. 1903. Cloth, $4.50 net; Sheep or Half Morocco, $5.50 net.

In the past seven years, it can be said perhaps without one dissenting voice, nothing has so occupied the minds of the profession, with its possibilities for diagnosis and treatment, as this one great discovery—the X-ray.

No one, perhaps, so much as one of the authors of this book has been so enthusiastic for it, and this work, the result of his observations in a wide experience, is the natural outcome. His associate has written well of the more practical side of the question regarding the mechanical elements, equipment, etc., this chapter being excellently illustrated by outline drawings, photographs, etc.

Particular attention has been given in the last portion of the work to the value of the X-rays in diagnosis and in therapeutics. The illustrations represent clinical subjects before the X-rays were used, during their application and the final therapeutic results obtained.

Transactions of the American Roentgen-Ray Society.

Third annual meeting, Chicago, Ill., Dec. 10, 11, 1902. Arthur W. Goodspeed, M. D., Philadelphia, Pres.; Dr. J. B. Bullitt, Louisville, Sec., Courier-Journal Job Printing Co., Louisville. 1903.

This volume contains a roster of the membership, the Constitution and By-laws and the papers read at the last meeting of the society in Chicago. These are of a high order of merit and of value to the members, especially as the discussion of each paper is reported in full.

An innovation in Society Transactions is the insertion of nine full pages of advertising matter in the back of the book, all of the firms represented having had an exhibit at the last meeting. An index made to include all the titles, names of authors and those taking part in the discussions would have been of value.

Text-Book of Obstetrics.

By Barton Cooke Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania. Handsome octavo, 900 pages, with 746 illustrations, 39 of them in colors. Philadelphia, New York, London. W. B. Saunders & Co. 1903. Cloth $5.00 net; Sheep or Half Morocco, $6.00 net.

This has been a standard text-book from its first publication. In this, the fourth edition, the author has made many changes, the chief of which is the including more detail attention to the diseases of the genital organs associated with or following childbirth. Dr. Hirst's long training and experience as a gynecologist eminently fits him for this. In this edition, too, many of the old illustrations have been replaced by new ones. This is a feature of the bookmaker's art which cannot be neglected in a work on obstetrics, good illustrations being more necessary than any other specialty.

The book can be thoroughly commended.

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LOUISVILLE MONTHLY JOURNAL

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Original Communications.

ABSCESS OF THE BRAIN.*

BY H. HORACE GRANT, M.D.,
Professor of Surgery, Hospital College of Medicine,
LOUISVILLE, KY.

Though traumatic abscess of the brain is not generally recognized as a frequent lesion, Pitt declares abscess is responsible for ½ of 1 per cent. of all deaths, judging from post-mortem examinations. This figure is probably excessive, and besides includes other causes for abscess than traumatism, which supplies only about 30 per cent. of the cases. Holmes estimates the rate of frequency at only 1-5 of 1 per cent. However, as the symptoms are not definite and the diagnosis consequently difficult and the mortality total unless treated promptly and properly, the relation of the subject to present surgery is of the highest practical interest. It is not intended to consider here abscess due to infection from disease either local or constitutional, but merely the form which succeeds infection of wounds about the head. The usual source of infection is a compound fracture or operations involving the cranium, though operations infecting the inner structures of the nasal cavity or the orbit have been followed by cerebral abscess. Fracture of the bone is not essential, as infected emboli and lymphatic involvement may account for the abscess. Commonly the seat of the abscess is near the point of injury, but occasionally it results from pyemic infection at a deeper part of the brain.

Location of Abscess.—The situation of the abscess may be extra or subdural or intracerebral, or even cerebellar. Extradural abscess is less common according to statistics than would be expected. Extravasations of blood from skull injuries would present a *locus minoris resistentia*, inviting infection from linear compound fractures, which are quite common, as well as from thrombi in the vessels of the scalp and diploe, when no fracture exists. There is, of course, less gravity in abscesses so situated, which may indeed exist for a long time unless the symptoms due to pressure lead to exploration.

By *lepto-meningitis* is expressed a condition in which the surface of the brain is bathed in a suppuration of the pia mater, the result of an infection from acute traumatism or from any of the other sources before named. This condition is attended with violent symptoms of acute septic meningitis and has little in common with traumatic abscess either in symptomology or treatment. In subdural abscess or in pus collection within the cerebrum or cerebellum the symptoms are those of a slowly progressing infection, with pressure upon the centers in the region of the lesion. Usually a week or two elapses after the injury or operation before any other indication of local infection is noted. In mild injuries the patient may have imprudently gone about work or play before symptoms appear. In one of my cases seven weeks elapsed with com-

* Read before the Louisville Medico-Chirurgical Society, October 16, 1903. For discussion see page 275.

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plete healing of the wound before any symptoms developed.

Symptoms are often a chill, with rise of temperature, usually preceded by a headache. There is often in children some delirium even in the early stage, and the temperature, while not high, is rarely subnormal, as is often the case in abscess from ear disease. Vomiting is common and indications that a turn for the worse are present. These symptoms are followed after a day or two, or perhaps even a week, by indications of pressure which vary with the situation of the deposit. The headache may persist, but as the patient is stupid and somnolent it is less conspicuous. The tongue is heavily coated, the breath offensive, the pulse below normal, the respiration correspondingly slow and often notably irregular as the somnolence deepens; epileptiform convulsions may attend; characteristic local paralysis and ophthalmoscopic revelations may help to indicate the situation of the pressure. Singular fluctuations in the symptoms may at times indicate a hope of recovery, or the condition may remain non-progressive for even weeks or months.

Diagnosis is based on previous history of traumatism, either accidental or operative, affecting the brain region, with subsequent suppuration. The interval between the traumatism and the first symptom is variable, but rarely is less than ten days and may be weeks. When these symptoms appear they are unlike acute inflammation of the brain, because so much less severe. Injuries or operative procedures which open the dura, or remove permanently portions of the skull so as to permit fungi of the brain tissues, are particularly prone to be followed by abscess. Gunshot wounds and punctured wounds invite deep infection, especially if foreign bodies are left. The vomiting, the slow pulse, the progressive weakness and the mental dullness, the burdened tongue, offensive breath, following the interval required for constitutional infection after pus formation, indicate abscess very positively. Local paralysis with unequal pupils and choked disc, while attending other pressure lesions, are highly corroborative, with the history and symptoms noted. When, however, a considerable time has elapsed after the injury, during which period the patient has been almost if not quite well, the diagnosis is much more difficult, especially when the injury was believed to be slight or unimportant, or perhaps not even noted at the time, and is only suspected by a scar found at later examinations. It is not an uncommon thing that a history of attacks of dizziness and headaches and other brain symptoms with apparent temporary recovery will attend the so-called latent stage. The symptoms come on more gradually, and the headache, though severe, is not attended with much temperature. The dullness, headache, vomiting, coated tongue, etc., may be consistent with even the prosecution of his usual avocation by the patient. In history like this, local palsies, especially aphasia, loss of memory generally, eye symptoms as revealed by the ophthalmoscope will be highly suggestive. Active and violent delirium is not a symptom of abscess, except in the first few days of the very acute form. This gradual progress, while more common, is not always the course, for latent abscess may be suddenly disclosed by the chill, convulsions and temperature which attend the more acute. Leucocytosis is found to attend such pus formations almost always (unless the collection is encapsulated), and is more prominent in the latent than in the acute and is to be regarded as highly corroborative. Symptoms of acute meningitis may complicate superficial abscess, and if thrombi have transported the poison to a remote situation the diagnosis is more complicated. Pain and tenderness over the scar or some muscular paralysis localizing the seat of deposit may help to direct the conclusions. Where, in punctured fractures, a por-

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tion of the bone or other opaque foreign body may have been carried deeply into the brain; or in gunshot wounds, where all or a portion of the missile has perhaps not escaped, a skiagraph may give valuable information. The symptoms of brain abscess, whether acute or latent, tend usually to get progressively worse, and after a few days of the exciting stage, pass into one of dullness, succeeded by somnolency, with later coma, either ending suddenly, or dragging on to complete exhaustion.

We are confronted with a condition the pathology of which is so simple and suggestive as to cause wonder it is not more frequent. Structures highly sensitive to infection, with the poorest facilities for drainage, and of great vascularity, favoring the transportation of germs, furnish a most fertile field. Hence the careful grouping of the characteristic symptoms should lead at least to a recognition of the urgent obligation for exploration in any probable diagnosis.

I report two cases coming under my care which are suggestive:

Case I. P. M., male, aged 32 years, a German, married, consulted me first at my office. He was accompanied by his wife, because he could not walk well, nor could he remember the word he wished to use often in conversation. Seven weeks before he received a blow in the left tempero-parietal region, which was treated as a scalp wound and received no attention after a few days, he continuing at his work until the morning of the day he consulted me. For the past three days he had felt dizzy at times, had had a persistent headache even longer than this, and yesterday and to-day he noted occasional inability to remember the word he wished for in conversation. He was normally phlegmatic, but now his expression was duller than usual, and the tongue, which could be protruded in a straight line, was coated with a brownish fur. He had vomited both to-day and yesterday, his bowels were constipated, his pulse was 62, steady and full, temperature normal. He referred his headaches to a point of tenderness just below the scar. The grasp of the right hand was weak and there was perceptible loss of power in the right leg. No history of syphilis could be elicited, and his wife and three children were healthy. He was given a mercurial purgative and ordered to bed. Two days later I saw him in bed at home. The dullness had much increased, but he slept badly and was restless. His tongue was heavily coated, his memory was much impaired and his weakness was progressive and pronounced, his pulse was 56, respiration 14, temperature 99°. The grasp was very weak and the reflexes in the leg feeble. No ophthalmoscopic examination was made, but the pupils reacted to light. Next day he was seen by Dr. J. M. Holloway, and though he was somewhat improved at Dr. Holloway's first visit, he was more stupid the next day, and the temperature was 97°, and we were both satisfied with the diagnosis of abscess, due to traumatism. Operation was urged but not accepted. He died on the twelfth day after I saw him. A post-mortem examination revealed an abscess in the cerebral tissues of the left side underneath the scar, about an inch from the dura, in front of the fissure of Rolando. There was no skull fracture. The abscess contained fully an ounce of pus. Drainage would doubtless have saved his life. Removal of the brain was not permitted, hence the conditions of the ventricles is not known.

Case II. A girl, aged 6 years, fell from a porch and received an injury in front of the right fronto-parietal suture. She was temporarily stunned, but not rendered unconscious. Examination showed a compound fracture, with a fragment about the size of half a watch crystal depressed edgewise, lacerating the dura and forcing out a portion of the brain, perhaps two teaspoonfuls. The bone was removed and a dirty wound cleaned, the dura sutured as well as the lacerations would permit, and a

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drain of gauze passed under the dura. The bone was not replaced, as it was believed the wound would suppurate. The child was dull for two or three days, but had normal temperature. The drain was removed in twenty-four hours. No more than ordinary granulation discharge appeared in the wound, which after ten days appeared closed. The child was imprudently permitted to play about the yard. Two weeks after the injury a severe chill occurred, followed by a temperature of 102½° and severe pain in the wound. The temperature continued irregularly between 100° and 102°, and on the third day a fungus appeared in the wound which enlarged in a few days to the size of an egg. After eight or ten days this fungus presented a small pedicle and was trimmed off with scissors. During this period the child was stupid and aroused with difficulty. It was advised that the wound be re-opened and search made for retained secretions, but consent could not be obtained, and, while the child still seemed to be in much the same condition on the eighteenth day after the chill, convulsions set in, and death followed in a few hours.

After death the wound was opened, and under the adherent dura about half an ounce of fetid pus was found.

Both these cases were most promising for operative treatment, and as it is fair to believe the abscess was single in each case as is the rule, the prognosis after evacuation of the pus should have been favorable.

Treatment—The management of acute and chronic abscess consists in prompt exploration as soon as the diagnosis becomes probable, because untreated abscess is almost inevitably fatal, while proper operative treatment gives between 65 and 75 per cent. recoveries. The technique is regarded as of great importance by Jacobson. The field is prepared as usual for the trephine, and unless a wound from previous compound fracture exists, a button is removed. The point of exploration should be determined by the site of traumatism in connection with the signs which determine localization in cerebral lesions. These last indications even outweighing in importance the point of traumatism. When the dura is reached bulging into the wound may occur, but if pus occupy the under surface no pulsation will be present. In extradural abscess, of course, pus will be found when the button comes out. Exploration with a hollow needle about the size of a knitting needle and four inches long, attached to a hypodermic syringe, should be introduced, as advised by Keene and Finger, in the direction of the suspected collection, pushing in the needle a half inch at a time and then aspirating. Even if there is no bulging into the trephine opening careful search must be made in every direction until reasonable expectation is satisfied. The puncture can do no harm if carefully made with an aseptic instrument. If the abscess be located the tract should be dilated with blunt forceps on the needle as a guide, and after the cavity is well evacuated it should be washed out with 1-4000 bichloride and a drain put in. Holmes used in successful case a hollow decalcified bone drain, left in under the dressings until it was absorbed. Usually a rubber tube will be employed. If the drain become displaced or symptoms of pressure arise the condition must be at once investigated. Two weeks will probably be required to heal the cavity from the bottom. The external dressings should only be removed when stained through by the drainage.

I think, from the literature of the subject, we may conclude that brain abscess is probably a much more common cause of death than is generally believed. Hence when succeeding a history of either severe or mild head injury we note persistent headache, mental dullness with perhaps local palsies and slight aphasia, careful watch should be instituted and the patient made to rest in bed. Even intervals of apparent improvement, if succeeded

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by return of symptoms, serve only to increase the suspicion. Subnormal temperature, coated tongue, ophthalmoscopic and blood examinations, with the above history, should enable us to reach such conclusion as will in all progressive cases justify exploration, with aspiration of the brain.

The situation of the abscess is greatly helped by a study of the cerebral localization before operation, and the success of operative steps depends upon the care with which the provisional diagnosis is made and the intelligent perseverance in exploratory puncture.

The mortality after the expectant plan of treatment is nearly 100 per cent., while when accurate surgical principles are applied after careful diagnosis, with complete operative and after treatment, 75 per cent. recover.

The surgeon should bear in mind that the danger of abscess is not past with apparent recovery from shock and concussion, and should confine patients receiving such injuries to bed until all headache disappears.

He should promptly advise exploration in suspicious cases—even when the diagnosis is obscure—confident that such a step can rarely be as great a risk as delay in the presence of a progressive lesion.

He should, after carefully and intelligently arriving at a diagnosis, thoroughly explore the suspected region, after opening the skull, until the abscess is located, or until he is satisfied no pus is accessible.

FRACTURES OF THE SKULL.*

BY IRVIN ABELL, M.D.,
LOUISVILLE, KY.

Fractures of the skull are usually divided into those of the vertex and those of the base, and as the writer's experience has been chiefly with the former, they alone will be considered in this paper.

There is probably no other class of surgical emergencies where apparently trivial injury is capable of producing such serious and disastrous after-effects, or where extensive and seemingly irreparable injury, is, with appropriate treatment, compatible with life and function. The fracture of the bone is not, *per se*, a matter of great moment, but the violence done the cranial contents with the occurrence of complications to be mentioned later, is of the utmost importance.

Fracture of the vault of the skull results as a rule from direct violence, although fractures by contre-coup or counter-stroke are not infrequently seen. The diagnosis may be easy, or in cases of linear fractures without skull or cranial symptoms, may be only conjectural; in cases seen a number of hours after injury the infiltration of the soft parts may be so deceptive, so completely mask the underlying condition, that a sure diagnosis is rendered possible only by incision combined with visual and digital exploration, and in those cases where the fracture occurs at the point of application of the violence, this method offers a satisfactory diagnosis; if the fracture, however, occurs at some other point, we must rely on the cranial symptoms.

The most frequent cranial symptom observed in serious skull fractures is a state of unconsciousness, and just what this signifies cannot always be told at a glance; it may mean one of three conditions—concussion, contusion, or compression—the latter due either to depression of bone fragments or to hemorrhage. If concussion is present it is equivalent to the ordinary "stunning" and soon passes away or else is inseparable from the condition of shock; the distinction between contusion and compression, in the absence of bone depression, is, in the first hours, not always easily made; if the ordinary symptoms of shock persist the application of appropriate treatment, and we notice the development of new and irregular symptoms, such as mental agitation and delirium, the rapid, feeble pulse becomes slower and

* Read before the Louisville Surgical Society, October 5, 1908. For discussion see page 297.

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stronger, respirations deeper, muscle inco-ordination appears, mental condition becomes worse, pupils enlarge without responding to light, external irritants have little or no effect, and with the gradual development of these symptoms there is no fever to indicate a meningitis, the presumption of contusion is fully justified.

If bone depression causes the compression and unconsciousness, physical examination reveals this at once, unless it be a punctured fracture, when the internal table may be depressed over quite an area, while the external table merely shows the puncture; if after the receipt of the injury unconsciousness comes on in the course of one or more hours, or if after the primary loss of consciousness, the patient having recovered, again lapses into the unconscious state, the diagnosis of hemorrhage is almost certain.

The fact that many of the subjects of skull fracture are in a more or less intoxicated condition at the time of receiving the injury, oftentimes renders the diagnosis extremely difficult, and we should be very careful in making a distinction between the two. The following case exemplifies three of the above mentioned points: J. D. T., white, age 40, was admitted to the surgical ward of the City Hospital, 11 p.m., September 2, 1901, with the following history: Five hours previous to admittance he had been in a fist fight and was knocked to the pavement, his head striking a little below and behind the right parietal eminence; after taking a number of drinks he was sent home on the car and later brought to the hospital; at the time of admittance he was evidently under the influence of alcohol, pupils normal, mental condition clouded so that he was unable to give an accurate account of himself, and motion of left side of body distinctly impaired; the wound in scalp at point of impact with pavement was enlarged and examined with negative result; he was then put to bed and carefully watched for further developments; by the next morning all evidences of intoxication had passsed away, the pupils were unequal, the right one being dilated and fixed, motion of left side of body practically abolished, and almost complete unconsciousness. It was now plain that we had to deal with hemorrhage, and the inequality of the pupil and left-sided paralysis gave us the locality. Going in at the Rolandic area of the right side a linear fracture with extensive extradural clot was found; this was removed and patient made an uninterrupted recovery, requiring, however, the removal of one or two loosened fragments of bone some weeks afterward. In this case we had, first, fracture at a point other than that at which the violence was applied; second, intoxication; third, hemorrhage giving rise to symptoms several hours after receipt of injury.

To me the two most important points in connection with fractures of the skull as regards immediate results or effects are hemorrhage and infection. A patient may come under observation with the history of a blow or injury, and yet at the time of examination, finding absolutely no sign or symptom of same, the physician may await the onset of symptoms while his patient actually bleeds to death. Several years ago I was hurriedly called to see a paper-hanger who had fallen from his ladder, and striking on his head was momentarily dazed; as far as I was able to determine he was, with the exception of slight shock, in good condition, there being not the slightest sign of injury to the scalp or skull; I advised him to go home, keep quiet, and place himself under the care of his family physician; he did so, his physician seeing him as late as 9 p.m. that evening, his fall having occurred at 3 p.m., and finding him in the above described condition; upon calling the next morning he found his patient profoundly unconscious, death occurring before he could be removed to the infirmary for operation; evidently a case of hemorrhage.

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The results of damage done to the brain itself in these cases depend upon the extent and location of the injury and whether or not there is added infection. In the silent areas of the brain we may see extensive laceration without serious immediate or remote results, while if the injury be to a focal center lasting damage is inflicted. In every case in which the dura is injured or torn the prognosis is correspondingly grave on account of the danger of infection. The infection may produce a cerebritis with general meningitis, or may become localized as in the following case:

William Stevenson, colored, aged 23, admitted to hospital November 6, 1900, with compound, comminuted fracture in right temporal region; there was extensive injury to frontal lobe of brain and overlying dura, the removal of bone fragments being followed by the escape of several drachms of brain substance; the wound was cleansed as well as conditions permitted, irrigated with saline, and drained with gauze; patient did well for several days, when temperature and local condition evidenced infection; there gradually occurred a protrusion of the brain mass through the wound, reaching the size of a large hen's egg, accompanied by a paralysis of the left side of the body; on November 26, twenty days after the reception of the injury, the abscess was, under general anesthesia, freely opened, irrigated and drained, followed by gradual recovery and complete restoration of function, the patient now earning his living at hard labor. It would be difficult to find a case presenting more extensive injury than this one, the finger could be introduced its full length into the brain cavity, and following infection a complete hemiplegia developed with a protrusion of brain mass through the opening in the skull, semi-conscious, temperature 102° to 103°, pulse weak, all apparently pointing to a speedy dissolution, yet under the treatment outlined above a complete recovery was made.

In direct contradistinction to the apparent amount of injury in this case is the following: Pat M., white, age 42, admitted to the hospital October 3, 1901, unconscious, respiration, temperature and pulse below normal, pupils unequal, the right one being dilated and failing to respond to light; the following history was obtained at his home: Two weeks previous, while at work, was struck on the head with a piece of iron, dazing him; this soon passed away, and he continued at work for two days, although complaining of headache during this time; he began acting queerly, and, being a hard drinker, he was treated for delirium tremens, being finally sent to the hospital in the above described condition; examination of the head failed to reveal even as much as a skin abrasion, there being, however, an infected cut over the right zygoma, the same having been received while confined to bed with delirium; the condition being evidently one of compression, the skull was opened at the anterior inferior angle of the right parietal bone, finding a large subdural clot extending well into the anterior fossa of the skull, the condition of same indicating that it had existed for some time; this was removed, drainage provided, and the patient made an uneventful recovery. In the Stevenson case we had extensive injury without cranial symptoms; in this one an apparently trivial injury almost caused death.

The indications in the classes of cases so far mentioned have been very plain, but what are we to do with a patient who exhibits a slight depression as the only result of his injury? or one who has mild focal symptoms indicating a slight hemorrhage? These cases when treated expectantly recover from the immediate effects of the injury, but many of them in later years show sequelæ, which, when developed, are rarely amenable to surgical treatment, consequently in the opinion of the writer each and every case of fracture of the vertex of the skull accompanied

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by either bone or cranial symptoms should be subjected to operation. I venture to say that there is hardly a member of this Society who does not know of a case of epilepsy or insanity following, possibly years after, an injury to the head. These cases can be grouped in two classes, the first embracing pressure lesions manifesting themselves by local irritations or Jacksonian epilepsy; in these cases the bone pressure or clot organization, as the case may be, has resulted in adhesions of the membranes, with local nutritive changes in the membranes and oftentimes in the brain tissue itself, a condition in which the result of an operation is always a matter of doubt.

The second group comprises those cases of slight injury to the bone with more or less contusion of the brain tissue; following the injury these cases may be semiconscious for a few hours or days, then mildly delirious, after which they apparently recover, only to hopelessly relapse, when, in the course of months or years, these contused areas undergo sclerosis. If the cases of both groups be subjected to appropriate surgical treatment at the time of the injury these unfortunate remote effects can usually be prevented.

In conclusion, I beg to present the following deductions:

1. In head injuries, where there is cause for suspecting the existence of fracture and contusion, or edema of the scalp prevents satisfactory examination, the scalp should be freely incised in order to accurately determine the existence or absence of same.

2. Depressed fractures, whether accompanied by cranial symptoms or not, and linear fractures when accompanied by cranial symptoms, are to be subjected to operation, as are all punctured fractures.

3. When local cranial symptoms are present, following injury to the head, with or without apparent fracture, surgical procedures should invariably be resorted to.

4. Neither hemorrhage nor bone pressure produce permanent brain lesions when removed early, consequently operations should be performed immediately following the reception of the injury.

5. If we wait for the appearance of remote results or effects the time for relief through surgical means is usually passed.

ASPHYXIA NEONATORUM.*

BY EDWARD SPEIDEL, M.D.,
Professor of Obstetrics and Diseases of Women, Hospital College of Medicine,
LOUISVILLE, KY.

This is a complication of labor that occurs frequently in the experience of every practitioner, and upon his ability to cope with the situation may depend the life of a child.

It is a condition of suspended animation, and with a knowledge of the mechanism that institutes the act of respiration in the newborn infant, it is not astonishing that asphyxia is a frequent occurrence in labor.

The respiratory act is induced in the newborn by two factors—first, an interference with the placental circulation, making the blood more venous in character, and this stimulating the respiratory center; secondly, external stimuli in the form of cutaneous friction and atmospheric exposure to a lowered temperature.

With the sudden decrease in placental area that follows upon the birth of the child, we have the required disturbance of circulation, the friction due to the passage of the fetus through the genital passages, and the exposure to the ordinary atmosphere of about 70° after an intra-uterine temperature of 100° supplying the other factor.

How readily the act of respiration can be incited from the first cause will be understood when it is remembered that the blood circulating in the fetus is always partly venous in character.

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*Read before the Jefferson County Medical Society.

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From the placenta the pure arterial blood is directed through the umbilical vein to the right auricle, but the venous blood from the lower extremities of the fetus ascends in the inferior vena cava, and becomes mixed with the arterial blood from the umbilical vein before it reaches the right auricle, and in consequence partly venous blood is at all times circulating in the head and upper extremities. With the circulating fluid already partly venous, it can be readily understood that any interference with the placental circulation will call the respiratory center into action, and respiration will be instituted.

If this occurs before the membranes have ruptured, then liquor amnii, and even meconium, enter the respiratory tract. If traversing the genital passages then vaginal mucus will be aspirated into the trachea.

From the above it may be understood that the principal causes leading to this condition are premature separation of the placenta, placenta previa, prolapse, compression, twisting or knotting of the cord. If the mother is subject to serious disease, or to severe hemorrhage, it acts in the same way by furnishing the fetus with an insufficient supply of oxygenated blood. In sudden death of the mother the same condition, of course, exists. Cranial compression, either by forceps or in a difficult labor through narrow birth passages, will also produce the condition.

Two degrees of asphyxia are generally recognized. In asphyxia livida, the milder form, the face is congested, lips blue, eyeballs protruding, but upon inserting the finger into the pharynx the throat reacts. In asphyxia pallida we have the other extreme—the body is cold, pale and limp, jaws relaxed, and the throat does not react to the finger.

It is of considerable importance to know when there is danger of asphyxia, as the relief of the condition must be prompt and preparations must be made beforehand.

In the intrauterine form the diagnosis may be difficult or impossible, the meager features to guide the physician under the circumstances being a slowing of the fetal heart to 100 or less, unusual restlessness of the child during labor, and the discharge in a vertex presentation of liquor amnii containing fresh meconium. In breech presentations the discharge of meconium is of no significance..

The passage of blood between pains should also put one on guard. Conditions that should lead to preparations for asphyxia are forceps deliveries, in which the pressure upon the head may result in this condition, and in all breech presentations, as delay in delivering the aftercoming head may cause it.

The milder form, asphyxia livida, generally responds to treatment in asphyxia pallida, the prognosis is very unfavorable, and determined and long-continued efforts must be made before any results can be expected.

Quite a number of expedients are suggested for the relief of this condition, the best known perhaps being the immersion of the child in a basin of hot water, and dipping it at intervals in one of cold, the idea being that the shock produced by these extremes will stimulate the center of respiration. It may be supposed that in the milder forms of asphyxia this procedure can do no harm; it may perhaps even be stated that the child recovers in spite of the treatment. In the graver form it can only defeat the purpose for which it is used. The child at best is in a devitalized state, and in no condition to react to shock. It has just emerged from a temperature of 100° to one of about 70°, and is handicapped by this change in its surroundings. Any further tax upon its vitality can only lessen its chances for life.

The Schultze method of forcibly swinging the child in the air from over the shoulder is an extreme measure, that first of all subjects the child to the danger of rupture of the liver, internal hemorrhages and fracture, and, besides, is open to the objection that during the entire process the child is

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exposed to the chilling influences of the atmosphere.

Laborde's rhythmic traction of the tongue is good as an accessory measure, but would rarely be depended upon alone in deep asphyxia.

The most rational method under all circumstances, and which is effective, simple and not open to such objections, is the Byrd-Dew method, described as follows (Grandin & Jarman, page 240):

"The infant is grasped with the left hand, with the neck resting between the thumb and forefinger, the head falling far over backward, the upper portion of the back and scapulæ resting in the palm of the hand, and with the right hand grasping the knees, the thighs resting in the palm.

"To induce inspiration, depress the pelvis and lower extremities and with the left hand gently flex the dorsum backward.

"To excite expiration, reverse the movement, bringing the shoulders and chest forward, and at the same moment bring the thighs forward, resting them upon the abdomen. Repeat from six to eight times a minute. This method may be used whilst the surface of the child is kept beneath hot water."

It should be the aim of every physician to thoroughly acquaint himself with a simple, effective means for meeting this condition. It must not be tiresome, and of such a nature that the nurse or some intelligent member of the family can continue the manipulations if the physician tires or is needed for other duties. It should be continued for an hour, as it is unfair to the child to cease with the efforts before that time; in fact, there are cases on record in which infants were finally revived after six or eight hours of such procedures, and it may be supposed that failure in some cases at least is due to too early abandonment of the attempt.

The following procedure, a slight modification of the Byrd-Dew, is one that has proven effective in a number of cases:

When the child's head is born wipe the nose with a piece of gauze to free it of secretions; cleanse the mouth likewise with a piece of gauze wrapped around the index finger. When the body is born grasp the feet, suspend the child and give it several vigorous slaps on the buttocks, then wrap it at once in the warmed blanket, laying it upon the right side to favor the closure of the foramen ovale. If respiration is not established place a basin of hot water, temperature 100°, large enough to submerge the infant except the face, on the bed, between the thighs of the mother, arranging the sheets in such a way as to avoid unnecessary exposure.

Immerse the child at once, holding it in the palms of the hands as in the Byrd-Dew method and without severing the cord, first of all to save time, and secondly to retain the sustaining influence of the placental circulation until the child is revived or the cord ceases to pulsate. It must be remembered that the placenta is an organ of circulation, nutrition and excretion for the fetus during intra-uterine life. At birth arterial blood continues to flow through the umbilical vein as long as the cord pulsates. The return venous circulation in the umbilical arteries, however, ceases a few minutes after birth in consequence of the contraction of the arteries by exposure to cold. According to "Ahlfeldt" this circulation is re-established by immersion in warm water; accordingly by submerging the child and cord in water at a temperature of 100° the placental circulation is re-established and intra-uterine conditions are practically restored until the child is revived. If the cord is of ordinary length it will not interfere with manipulations. The child is then held under water, face upwards, in the manner described previously, care being taken to keep the occiput submerged, in order to get the stimulating effect of the heat upon the respiratory center in the medulla. For the first five minutes the movement for expiration should be rather forcible, in order to expel any fluids that may have entered the lungs.

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Thereafter they should be continued evenly and regularly until respiration is well established. The cord can be ligated and cut when it suits the convenience of the physician and does not interfere with his efforts. During all this time the temperature of the water should be maintained at about 100°, and after severance of the cord the basin may be removed to any convenient location.

After resuscitation it must not be forgotten that the child requires especial attention for the first forty-eight hours. It should be well wrapped and surrounded by hot water bottles to maintain the body heat.

The resuscitation of asphyxiated infants may then be said to depend upon the following principles:

1. The maintenance of the intrauterine temperature for a sufficient length of time during and after the manipulations.

2. Non-interference with the placental circulation until the cord stops pulsating.

Lastly—The induction of artificial respiration by that method which interferes least with the other requirements.

DISCUSSION.

Dr. E. A. Harthill: Just some points in regard to the etiology: In syphilis of the lungs, the enormous overgrowth of connective tissue presses on the blood-vessels and diminishes the capacity of air vesicles. In the rare condition of white pneumonia there is a degeneration of epithelial cells. Atresia of the pulmonary artery and a patulous foramen ovale may cause this condition. In regard to the treatment, in cases where the child is very much congested, cutting of the cord and allowing the child to bleed is sometimes resorted to successfully.

Dr. Charles Moir: I tried the bleeding of the cord two or three times and failed, but it is recommended very highly by many obstetricians. I always carry in my obstetrical grip a small rubber bulb syringe, which is attached to a small catheter, and by means of this the mucus can be sucked out. I sometimes place a handkerchief over the child's mouth and inflate the lungs in that way.

Dr. O. A. Kennedy: The first point I would like to emphasize is that whenever you find a baby asphyxiated, first observe whether it is a blue baby or a pale, debilitated baby. If it is a blue baby, the first thing to do is to bleed through the cord, letting out several teaspoonfuls of blood; this relieves the condition of apoplexy. The next thing is to excite the action of the respiratory centers by hot and cold water. If the baby is pale you do not want to bleed it, for the indication is one of anemia; treatment is practically the same, except in regard to bleeding. Artificial respiration is the thing that does most good in these cases, and it is very important not to stop too soon, not under two or three hours. The quickest way to dilate the lungs is through the mouth, and force the air out by means of the muscles of the chest.

Dr. Florence Brandeis: The only point I want to mention is one of which I read recently—dilatation of the sphincter of the anus. In cases of mild asphyxia, I have gotten excellent results every time by putting my thumbs into the rectum.

Dr. Carl Weidner: I had rather an involuntary experience with bleeding in a case of asphyxia pallida, where I made artificial respiration by the French method of pressing the child's head between the thighs and then back again. After about a half hour I found the child gradually getting better and the heart's action returning. Then I noticed that there was a slight hemorrhage from the navel and I think this bleeding really did good. In all cases where we have an over-filled heart, a little relief to the venous system does good. I think the graver condition is simply an advanced stage of the other.

Dr. Speidel (closing): In regard to the symptomatology, I did not attempt

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to give everything, but only those symptoms due to disturbance of the act of respiration.

The object of the paper was this. We see cases of asphyxia neonatorum in which the attending physician uses indiscriminately either one method or the other for five or ten minutes and then changes. I believe the greatest number of cases of all kinds can be saved by following one well-determined method, and I believe the simple Byrd-Dew method is one of the best to carry out, especially for asphyxia pallida. The method described in the paper is applicable to both classes, for you really bleed the child by immersing the cord in hot water, thus re-establishing the venous circulation. In a recent case where I was present the child was cast aside as dead, and I volunteered to try to do something for it. After an hour and a half it was restored and is living to-day.

INFLUENZA IN CHILDREN.*

BY PHILIP F. BARBOUR, A.M., M.D.,
Professor of Diseases of Children, etc., Hospital College of Medicine,
LOUISVILLE, KY.

The advent of winter naturally brings us face to face with the diseases which characterize that period of the year. Since the fateful appearance of influenza, more than a decade ago, it has remained with us, always attacking many patients each year and leaving in its train that profound depression of the physical and even the mental powers which has added to the yearly mortality.

With its clinical aspects in adults all of us are familiar, but its manifestations during infancy and childhood, that *terra incognita* to many, are not so well known, and, therefore, influenza is not so frequently recognized at that age as it should be.

As a rule, the Pfeiffer bacillus is more apt to attack the adult members of the household, and the children take the disease from their elders. They seem not to be so susceptible to the germ, and infants at the breast are fairly immune. Its ready communicability, however, should warrant us in isolating such cases, at least for a time. The bacillus, being so small, is readily transmissible, apparently even through the air, and it seems to create no immunity. Possibly, however, the changes of type from time to time may indicate a lessened resistance or a partially acquired immunity of one system as compared with another. The bacterial poison seems to be a protein and is found in the body of the germ, very little, if any, being excreted into the media in which it grows. This toxin seems to affect by preference the central nervous system, which explains many of the nervous phenomena.

The bacillus is found in the mucous membrane of the upper air passages, rarely in pure culture, and almost never in the blood.

There are three general types of the disease depending upon whether the germ attacks the nervous system, the respiratory or the gastro-intestinal. Then there may be combinations of one or more of these in varying proportions, so that the disease assumes many phases which renders the diagnosis at times difficult. When it attacks the nervous system of the young the symptoms are severe and alarming. Besides the pain and aching in the limbs which give rise to great restlessness and irritability on the part of the child, there are more marked disturbances, such as convulsions, opisthotonus, and other symptoms of meningeal irritation, or, on the other hand, marked drowsiness amounting to somnolence, or even coma, may be present. The infant, not being able to describe its painful limbs, shows its suffering by the expression of its face and by its tossing from side to side, or its peevish and whining desire to be left alone. Headache is sometimes due to inflammation of the frontal sinuses.

The results of the inflammation of

* Read before the Jefferson County Medical Society, October 21, 1903.

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the nervous system in the adult are sometimes very serious. The mental derangements and the various paresthesiae that so often follow the attacks in adults are not nearly so common in earlier life. Multiple neuritis is very rare in children. The explanation lies probably in the healthier condition of the nervous system in the child before the various depressing habits and vices have attacked its integrity.

Inflammations of the respiratory system, with their catarrhal symptoms, furnish the usual clinical concept. The disease usually begins with coryza and other catarrhal conditions of the upper air passages. Fortunately this type is considered to be relatively less common in children, for it is obviously the most dangerous.

The extension of the inflammation along the mucous membrane of the air passages soon results in an extensive bronchitis, which rarely gives trouble to the adult, but to the child it is a formidable condition from the tendency toward a complicating broncho—or lobar pneumonia. When either of these develops, sufficiently characteristic and diagnostic symptoms will be met with. Frequently influenza simulates pneumonia so closely that only careful auscultation will reveal the absence of any consolidation. In children a very rapid respiration, possibly grunting, may be observed, due to the toxemia of the disease, and not to consolidation. So that great care is often needed in making a differential diagnosis. When either of these complications arises, the danger to the child is materially increased. The younger the child the greater the danger. Rachitic children, for well-known reasons, are peculiarly liable to a fatal conclusion. However severe the pneumonic symptoms of grip, they will often clear up in a few hours, as if by magic, when the disease has reached its termination. So that our best efforts must be exerted to maintain the strength until nature comes to the relief as she will often do in such cases. An important point for consideration is the very irritable state of the mucous membrane of the bronchi which persists after the disease is well. How many people have a long-continued cough following an attack of the grip and frequently there is no relief from the cough until a change of residence is made to some warm and dry climate. This vulnerability of the mucous membrane is responsible for the onset of tuberculosis, and vital statistics will show how greatly the morbidity of tuberculosis in recent years has been increased by influenza.

In children we find still another avenue for infection with the bacillus of tuberculosis. The catarrhal condition of the mucous membrane of the nose and mouth and pharynx naturally leads to some involvement of the cervical lymphatics. In the so-called scrofulous child, with its predisposition to chronic glandular inflammation and hence to tuberculosis, the onset of influenza lights up a conflagration which may destroy the structure.

Recognizing the danger arising from influenza in such predisposed cases we should redouble our efforts to prevent the infection and to cure any lesions in the lungs.

The gastro-intestinal form of attack is peculiarly common in children, though its danger is less than one would anticipate. Sudden vomiting with great irritability of the stomach and bowels are very common symptoms of the onset of the disease, and if accompanied by headache and severe pains in the extremity, the diagnosis is practically assured. Although these symptoms are alarming, they yield very promptly to appropriate medication and they are not considered dangerous.

Aside from these type cases we often find in children a simple febrile disturbance with so few of the classical grip symptoms that such cases will often go unrecognized, though they will usually show some of that somnolence or drowsiness mentioned above.

Without attempting to give an ex-

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haustive analysis of the many symptoms not included in the above list, a little time may be profitably devoted to a brief allusion to the dangers arising from the extension of the inflammation to the middle ear and the effect of the disease upon the heart itself.

The inflammation of the middle ear is usually catarrhal, but if there has been a previous suppurative inflammation in the ear, influenza will light it up again, and the inflammation will then be suppurative with the tendency to involvement of the mastoid cells and extension into the lateral sinus or the posterior fossa of the skull. Another danger lies in the fact that the attic of the middle ear is not always completely ossified in children, but may have a narrow strip of cartilaginous tissue which readily carries the infection to the middle fossa of the skull where it sets up a fatal meningitis.

All recognize the dangers which surround the heart. Strange to say, endocarditis very rarely occurs unless there has been a precedent rheumatism, so that the heart is usually involved either by a pericarditis which may have been very insidious in its onset and symptoms, or more frequently by a myocarditis, though vegetations and other lesions may be found. The enfeebled heart finds pneumonia too heavy a tax for it, and so the patient dies, or perhaps the disorganization is only such as to make the patient for the rest of his life merely a weakened, breathless individual, ready to succumb under any increased stress.

The diagnosis and prognosis have been discussed to some extent in narrating the symptomatology. It remains necessary to study a little more closely a few points which are gathered together here for convenience. And here it must be said that many suffer from catarrhal symptoms which are called catarrhal fever, and which can be differentiated only with great difficulty from the milder types of influenza.

The sudden onset, with high fever, aching and chilling, suggest pneumonia, which is to be differentiated by its physical signs. Sometimes, however, pneumonia is a real complication.

From malaria it is differentiated by the absence of the enlarged spleen, and the plasmodia, and by the failure of quinine to mitigate the fever or symptoms. Influenza simulates meningitis in many respects, but the symptoms of meningitis are more persistent and less variable, and a very short time usually makes the matter certain.

Typhoid fever is very like those cases which run a continuous fever of several weeks duration. There are also rose spots in influenza, but they are larger and over a greater surface of the body, remain longer than the three days, and finally become brownish discolorations after fading. Tympanitis, Widal's reaction and the diazo reaction are also helpful.

Errors sometimes arise in diagnosis because of the various eruptions which may occur in influenza. These eruptions may stimulate the dusky spots of the measles or the brighter flush of scarlet fever. Erythema with desquamation may strongly suggest scarlatina, especially if there has been a sore throat. Careful examination of these rashes and comparing them with the other symptoms which should go with them will clarify the diagnosis.

Finding the Pfeiffer bacillus is of course final, but few regular physicians have the time or facilities for the proper bacteriological work.

The prognosis of uncomplicated influenza is good, but the effect of the numerous complications must be estimated separately.

The treatment of influenza is entirely symptomatic and consists in the administration of those drugs which relieve pain and discomfort, promote the elimination of waste products by kidneys and bowel, sustain the vital powers until the imminency of the attack has subsided, and prevent as far as possible the onset of complications by perfect hygiene.

Without entering too much upon

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these principles and methods which are sufficiently familiar to us all, the relief of the pain is one of the most pressing duties, and for this small doses of phenacetin with Dover's powder or codein have proven most satisfactory.

As a matter of routine, I give small doses of strychnine, preferably the arsenate, throughout the illness, believing that there must be a fight between the organisms and the cells of the patient. If the individual cells, whether of the various organs attacked, or the white blood cells, are stimulated, they may be better able to withstand the attack of the germs and thus lessen the virulency of the affection. I believe that early stimulation with strychnin or alcohol, or both, tends to modify the severity of the disease. Their early use frequently obviates the complete prostration so often following after influenza.

The fact that the Pfeiffer bacillus remains localized in the mucous membranes suggests that thorough cleansing of the available mucous membranes with antiseptic solutions, such as Dobell's solution, glycothymolin, or even normal salt, will tend, not only to mitigate the catarrhal discharge, but to modify to some extent the severity of the disease.

Quinine is considered valuable in influenza, but it should be used, if at all, in small dosage. The deleterious action of large quantities of quinine upon the nervous system, and also upon inflammation of the middle ear, should make us cautious in administering it.

There is no disease which calls for more judgment and practical medical knowledge than influenza.

DISCUSSION.

Dr. Henry Enos Tuley: We have all been impressed with the fact that a number of types of influenza are seen in children, more often than in adults. In various years we have had a predominance of one type over the others; some years the pulmonary type will prevail, and in others the gastro-intestinal. Involvement of the pulmonary mucous membrane is very serious. I do not believe the essayist laid stress enough on complete isolation of the children in a household from a patient ill with influenza.

It does not seem to me that there ought to be very much difficulty in making the diagnosis between grippe and typhoid fever. As to treatment, I have used aspirin with very decided effect. It eliminates by dilating the capillaries of the skin, and used with strychnia is a most excellent remedy. I think that on account of the effect of the grippe on the nervous system, the supportive plan of treatment is most essential, and the nutrition must also be kept up. Milk and eggs in some form comprise the best form of nutrition. The prostration in children is apt to be as severe as in adults. It is just as important to quarantine the children in influenza as in the case of infectious diseases.

Dr. Ewing Marshall: I would just like to call attention to the fact that influenza did not make its first appearance ten years ago. There is a most interesting account of it in the works of Dr. Rush, and he goes into the symptomatology just as thoroughly as the books do to-day. He refers to every part of the body which we recognize as being involved.

The complications which appear have always impressed me; I have found that we can look for them according to the tendency of the individual, for it expends its force at the weakest point. Our duty is to support the patient, and especially in the case of children.

Dr. C. C. Godshaw: I have come to the conclusion that the best treatment is just to support the patient. We must treat the patient, not the disease. The salicylates have given me the best results; aspirin is the salicylate of methyl. In the use of quinine we must stop short of cinchonization.

I fear the sequellæ of influenza more than I do the trouble itself. We know

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that a favorite remedy among the laity is quinine and whisky and then to bed, and I believe that is about the best thing. Start the secretions actively and then let your patients alone, with a mild, nutritious diet. If pneumonia develops it is only a coincidence and the two troubles are distinct. If it is a specific trouble I hope we can find an antitoxin for it. I have about come to the conclusion that the salicylates are a specific for it. Isolation is very important.

Dr. Curran Pope: I confess that I have seen very few cases in children. I can only speak in connection with cases I have seen in my sanitorium. I have invariably utilized hydrotherapy. The electric light bath, followed by cold water douches, cuts the trouble short and lessens the sequellæ. My explanation has been that the effect is due to stimulation of the elimination, thereby removing the toxines, in the first place. Second, the increased leucocytosis, and, third, stimulation of the nervous system. The application of cold in the percussory form up and down the spinal cord will dislodge any amount of mucus in the bronchial tubes.

Dr. Vernon Robins: In communicable diseases, bacteriological examinations are of little value, but in the atypical cases I would suggest that the laboratory of the Health Office is always ready to make examinations and assist in the diagnosis.

As to the use of gargles, it would be well to have these gargles as hot as they can be borne, as this germ is susceptible to high temperatures.

Dr. J. R. Morrison: As to the prophylaxis of this disease, it usually comes in such a way that the doctors are overworked. Isolation should be insisted upon, because it is a disease which will attack the young. We get good effects from spraying the nose and throat with a very mild antiseptic solution. I have tried it on myself and advised it for my friends among the physicians. I am satisfied that I have escaped it a number of times by using a gargle of Dobell's solution.

Dr. Barbour (closing): I am glad that more stress has been laid upon isolation in these cases. It is well also for the adult members of the family to be kept away as far as possible. As to typhoid fever, the only cases which simulate it are those which persist for a long time with a high fever which we cannot control. Occasionally it does run such a course. As to differentiation of influenza from measles, scarlet fever, and so on, it is not often that we have difficulty here.

THE X-RAY AND SURGICAL TUBERCULOSIS.

BY THOS. L. BUTLER, M.D.,
Professor of Surgical Pathology and Clinical Surgery, University of Louisville.
LOUISVILLE, KY.

Mr. President and Gentlemen of the Brashear Medical Society: Your Secretary has kindly invited me to meet with you and read a paper on some phase of "Radio-therapy." I assure you that it gives me great pleasure to be with you and I thank you for the privilege. Having used the X-rays in connection with my surgical work for the last five years as a diagnostic means and for two years as a therapeutic means, I feel that I can speak with at least some degree of experience. When we review the exhaustive literature which has appeared in the journals for the last eighteen months, with the many "cures" reported, cures of all troubles that flesh is heir to, from superfluous hair to alopecia, I am frank to say that I feel somewhat abashed in reading on a subject so overwritten.

The subject to which I desire to call your especial attention is the use of the X-ray in the patient the subject of surgical tuberculosis. It seems to me, after having treated now one hundred cases of various troubles, mainly carcinomata, sarcomata, surgical tuberculo-

* Read before the Brashear Medical Society, October 20, 1908.

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sis and skin affections, that the results in our tubercular cases have been the most promising. I was particularly gratified in hearing Dr. Jno. B. Murphy's report before the American X-ray Society last December, in which he bears me out in my experience. He says in part:

"The X-ray is not only an aid in making a differential diagnosis in these cases, but it is also an aid as a therapeutic agent in tuberculosis of the bones and joints. I have had a very gratifying experience with it in two cases of tuberculosis of the knee-joint involving the synovial membrane. They were injected without producing the desired effect. The X-ray was then used, and one case, in which the effusion had existed for nine months, was discharged from the hospital twenty-one days after admission without a particle of effusion or the slightest diminution in the range of motion of the affected joint. I never got such a result before where I simply injected the mixture of formalin, iodoform and glycerin. By putting on the X-ray and stimulating the production of new tissue, as we know the X-ray does, there was almost immediate restoration of the synovial membrane to its normal function of secreting and absorbing so that there was not a particle of retained effusion in the joint.

"Not alone in this type of tuberculosis of bone has the X-ray shown its striking features, but I also have three cases of tuberculosis of the spine, in which its use was followed by the most striking and gratifying results."

The writer's experience in these troubles has been 23 cases. A short report will be made of the results in them:

CASE I.* This girl, age 16, was shown to the Medico-Chirurgical Society of Louisville, by Dr. Evans, in April, 1900, in connection with his paper on Lupus of the Larynx. In addition to this trouble she had ulceration of the same character involving upper lip, nose, and extending through hard palate. The trouble had lasted over a period of seven years, the patient having been treated in the clinics of various medical colleges. Through the courtesy of Drs. Evans and Koehler she came under the writer's care. She has been treated more or less steadily since April, 1902, the treatment being carried to the point of active dermatitis on several occasions. The lesion on face and nose is healed; the small tubercles on face and about nose have about disappeared; the ulceration in nose extending through hard palate is much improved; the septum, which at one time looked as though it would be destroyed, is now much improved. The patient has at no time had any internal treatment, and only a simple ointment, lanolin and zinc, locally when needed to relieve discomfort of dermatitis.

CASE I. At present time. Showing loss of pigmentation over area treated.

The only doubt which can arise in this case is one of diagnosis; but her trouble has been diagnosed, as stated, by men of unquestioned ability. So far as I know, no microscopical examination has been made. The patient was sent to Dr. Evans' office for examination this morning, and he makes the following report:

*This report taken from Louisville Journal of Medicine and Surgery, December, 1902.

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LOUISVILLE, KY., Nov. 12, 1902.
Dear Dr. Butler:

In the case of Birdie ———, suffering from laryngeal lupus, I find there has been a marked improvement since my previous examination. The nodule that was located above the true cords in the receding angle of the thyroid has entirely disappeared. The tumefactions over the posterior surface of the cricoid have diminished in size. The outlines of the vocal cords can now be easily made out, and there is considerable improvement in the voice. Thanking you for the courtesy, I am very respectfully, T. C. EVANS.

This girl has since developed syphilis, having contracted it with typical initial lesion, secondary rash, etc.

CASE II. Mrs. B., referred by Dr. A. M. Vance, aged 23, March 2, 1903. Ulcer 2x2½ on back of right hand; appeared four years ago. Ulcer healed June 1, 1903. Used Finsen light in this case about three weeks, but without apparent effect.

CASE III. A. N. R., aged 37, white, March 29. Ulcer on chest lasted six months. Treatment stopped June 20, when active dermatitis developed. No treatment since. Ulcer at present entirely healed.

CASE IV. E. S., referred by Dr. Sherrill, May 11, 1903, age 11, white. Two ulcers size of dollar on left ankle and one on right; typical unhealthy ulceration; ankles swollen and boggy; enlarged gland in neck which became infected and broke down; afterward developed cold abscess on left thigh. Treated daily until 26th August, 1903. Ulcer healed and patient attending school. Don't know condition of abscess.

CASE V. January 30, 1903. Mrs. W. Ulceration on left cheek about size of dime surrounded by small white deposits size of pin-heads. Has lasted for four years. Nodule as big as split pea above and to outer side. Stopped active treatment last of April; at this time ulcer healed; a few deposits still present. Has taken treatment at irregular intervals since, now returns for treatment of nodule, which has begun to enlarge.

CASE VI. D. S., age 30, referred by Dr. Abel. Tubercular ulceration, and sinuses right thigh were curetted by Dr. Abel; did not heal readily; referred for treatment September 11, 1903. Present condition, ulcers healed, with exception of small scab over same.

CASE VII. September 9, 1903. Mrs. W., referred by Dr. Ray, age 60, white. Deep ulcer, involving entire right ala of nose. Has lasted twenty-four years. Has had to date twenty-eight treatments. Ulcer healed about half and filling up. (November 8, 1903, ulcer entirely healed.)

CASE VIII. Dr. Y., dentist, referred by Dr. Vance, June 3, 1903. Sinus going into deep cellular structure, left thigh, discharging. Treatment seemed to open up same. Present condition, ulcers over this area unhealthy appearance, with no attempt at repair.

CASE IX. A. M., age 80, August 16. Large and deep ulcer, extending over greater portion of left forearm and one on arm about the size of a dollar. No improvement after six weeks treatment.

CASE X. Referred by Dr. Ritter, M. C., age 49. Ulcer behind right ear the size of a dime, elevated, discharging clear serum. Duration about a year.

CASE XI. Mr. K., age 36, referred by Dr. Lucas. Ulcer on right temple the size of half a dollar. Both these doubtful as to diagnosis. Both healed after 20 and 23 treatments respectively.

CASE XII. T. H., white, aged 14, referred by Dr. D. Y. Roberts, March 3, 1903. Enlarged glands on both sides under jaw. Nodule began two years ago; greatly improved after two months treatment. Stopped treatment on May 28. Don't know present condition.

CASE XIII. Referred by Dr. W. O. Roberts, March 29, aged 19. Enlarged glands under left ear; shows great im-

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provement; still under treatment; reduced about half.

CASE XIV. January 24, Dr. W., aged 30. Enlarged glands; both sides neck greatly disfigured; night sweats, temperature 100°. After three weeks treatment great improvement. Has continued treatment at his home in interior of State since. Last seen in September, apparently about well. Some enlargement, but scarcely noticeable.

CASE XV. Miss T., referred by Dr. Vance, June 17. Enlarged gland under angle right jaw; after eight weeks treatment gland broke down, softened; was opened by Dr. Vance. Present condition: wound about healed, tumefaction greatly reduced.

CASE XVI. Referred by Dr. C. W. Kelly.

CASE XVII. Referred by Dr. W. O. Roberts.

(Both reported in detail in MONTHLY JOURNAL OF MEDICINE AND SURGERY, December, 1902.)

These cases probably Hodgkin's disease; both greatly improved under treatment.

XVI. Reduced from 16¼ to 14½ inches.

XVII. Reduced from 16 to 14½ inches.

(Both stopped treatment.)

CASE XVIII. William W., referred by Dr. Gilbert. (Following report taken from LOUISVILLE MONTHLY JOURNAL OF MEDICINE AND SURGERY, December, 1902.)

"CASE XI. W. W., male, white, age 10. Little patient had history of an abrasion of the skin near the ankle joint, eight weeks before. Very slight evidence of injury at present, small scar remaining. Ankle swollen, red, and very painful, patient taking morphine four or five times a day for relief. Any movement of joint caused great pain. Mother in last stages of phthisis. Evidently an inflammation of the synovial membrane of joint, probably tuberculous in character. Dr. Gilbert and Dr. Vance, who also saw the case, concurred in the diagnosis.

"Treatment began June 25, 1902, patient being carried to office with limb on pillow. After first treatment pain much less, and by July 3 morphine stopped. Treatment has been continued steadily, with exception of one month rest during August. To-night you see him walking, and any amount of movement of joint causes no pain. No mechanical dressing or appliance was used except light gauze bandage. The slight limp which you notice seems due more to habit than pain, as he says he has

CASE XI. Skiagraph showing destruction which had occurred as result of epiphysitis. December, 1902.

none. He still uses one crutch, as I am somewhat afraid to allow him the full use of limb as yet. I show you skiagraphs taken Saturday which throw some light on the condition. These show destructive process which has been going on in lower end of tibia, an epiphysitis."

Present condition: Can now walk without any crutch; there is just the suspicion of "limp," which I believe is habit, as any amount of movement causes no pain.

CASE XIX. Referred by Dr. Vance, March 11, 1903, age 5. Will say that this little patient was sent for skiagraph

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in December, 1902. Skiagraph taken and shows some degeneration in joint; he afterward passed into the hands of the osteopaths. He then was sent to Dr. Vance in March. On March 11 he sent him for treatment, with the following letter:

March 11, 1903.

Dear Dr. B.:

I send you a little boy, Wm. H., suffering with tuberculous hip joint disease, just entering the second stage, atrophy; pain on movement, with limitation of normal motion, due to muscular reflex rigidity. I hope the X-ray may be of service to him. Very truly,

AP MORGAN VANCE.

Sept. 1, 1903.

Dear Dr. B.:

I have just examined the H. child, and find him in most excellent condition generally, with only a very slight degree of atrophy left; all movements normal. Very truly,

AP MORGAN VANCE.

CASE XX. L. R., aged 4, referred by Dr. McKinney; sent to Dr. Vance for opinion:

March 23, 1903.

Dear Dr. Butler:

The little R. child you kindly sent me for an opinion has undoubtedly tuberculous hip joint disease. The process is well along in the second stage, as evidenced by the atrophy, limited motion and the deformity. Every movement is limited and the muscular reflex rigidity is marked.

Very truly, AP M. VANCE.

Oct. 1, 1903.

Dear Dr. Butler:

The R. child has been so wonderfully improved that I am filled with astonishment. She seems in perfect health, and the limb is now without deformity with almost normal movement. I congratulate you on the result.

Truly yours, AP M. VANCE.

CASE XXI. R. R., referred by Dr. Vance, January 19, 1903. Tuberculosis of knee joint. Enlargement, very limited motion, knee fixed in partial flexion, very slight improvement after nine months treatment. Will say that this boy was walking on leg during treatment without help of crutch, and feel that at least something was done for him in that we improved his motion to a slight degree. On October 10 he fell on knee and produced some injury to same.

CASE XXII. H. L., white, age 13, referred by Dr. Gilbert, August 13, 1903. Typical knee-joint trouble. Has been under treatment only one week. Shows quite a good deal of improvement in this time.

CASE XXIII. Wm. M., age 33. Tubercular thecitis of hand and wrist. This patient has had amputation of the right leg at hip for tuberculosis.

No definite improvement after six months treatment.

It is the writer's purpose to call your attention particularly to the joint cases. It seems that we have been able to accomplish more in these conditions than from any other known form of treatment. Will say that these cases had no mechanical appliances during the time they were under our care.

Society Proceedings.

[Reported by E. A. Forbes.]

THE LOUISVILLE SURGICAL SOCIETY.

Stated Meeting, Monday, October 5, 1903, Dr. S. G. Dabney, President, in the Chair.

CHOLELITHIASIS.

DR. L. S. MCMURTRY: This specimen was removed post-mortem from a man aged 42, who had had symptoms of gall-bladder disease for several years. He was very much emaciated, but not jaundiced; he had several violent attacks of colic, which led him to seek surgical aid. I operated on him during the first week in September, and the gall-bladder was found filled with gall-stones. There were forty-two in all. These were easily removed, and I ex-

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plored carefully, with the patient in good position, the cystic and common duct and could detect nothing else; I felt that everything had been accounted for by the condition found in the gall-bladder, drained it, and completed the operation with the patient in good condition. As soon as he came from under the anesthetic he suffered with persistent vomiting. The abdomen was flat, and on the second day, with the aid of an enema, the bowels moved, but the vomiting did not cease, and symptoms of intestinal obstruction set in. He died on the fifth day. Dr. James Vance made the autopsy and removed the specimen I present, which was the cause of the obstruction. It will be observed that the duodenum was completely obstructed by an organized inflammatory band. There was undoubtedly partial obstruction prior to operation, and the traction on the structures during operation, with the post-operative congestion, doubtless made the partial obstruction complete. These stones removed post-mortem had ulcerated through the common duct. It is noteworthy that in this case there was partial obstruction of the common duct by gall-stones without jaundice.

DISCUSSION.

Dr. James Vance: I might make a report on the post-mortem. Immediately after death the incision was enlarged and the specimen removed. The abdominal wall was perfectly flat, and on opening the wound I found union had taken place nicely. The gall-bladder was in position at the upper angle of the wound and the peritoneal cavity was dry and clean without any evidence of inflammation. The intestine as far as about four inches below the pyloric orifice of the stomach was flat; above that it was all distended. The gall-bladder was perfectly adherent to the liver so that it had to be cut away. Several of the stones had ulcerated through the cystic duct into the hepatic duct, and the common duct was filled with stones, arranged in perfect order. The largest lay against the opening into the intestine. Apparently the pressure of the stone had caused the obstruction and there was almost a complete chronic stricture of the duodenum. The mucous membrane had swollen so that the stricture was apparently complete at the time of the post-mortem; it was composed of fibrous tissue. The stomach was in perfect condition.

Dr. L. S. McMurtry: I should like to add that all of these tissues were very much thickened with inflammatory deposits, and in getting the gall-bladder forward I had to strip it away. It made it very difficult to explore these ducts. I present the case as an illustration of the difficulties encountered and the complications to be found in neglected cases of inflammatory disease of the gall-bladder and ducts. There was no jaundice present, and the patient gave a history of never being jaundiced at any time.

Dr. A. M. Cartledge: This is the greatest anomaly I have seen. We have seen many such cases of stones, but I never knew of a case of obstruction, though I can see how it occurred. The surprising feature is the absence of jaundice in this case.

Dr. Louis Frank: The case is of great interest on account of the large number of stones present without jaundice or symptoms of obstruction. No doubt this man had a localized peritonitis in the region of the ducts and the gall-bladder, and this may have had something to do with the cause of the obstruction itself. I do not remember to have seen such a thing act as the prime cause in the production of obstruction, though I am sure that some of the authorities on stomach diseases mention gall-stones and adhesions about the duodenum producing partial obstruction. If we had partial obstruction here, we can see how the swelling following the operation would have made it practically complete.

Dr. A. M. Cartledge: Is it possible that as a result of the partial obstruc-

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tion due to the thickening that the traction in raising the gall-bladder induced acute obstruction?

Dr. J. B. Bullitt: With the specimens before us and the report of the post-mortem, it is hard to understand what could have been done if he had had all this knowledge at the time. He could have removed the balance of these stones, but that might not have had any relation to the outcome of the disease. In cases where the gall-stones are in the gall-bladder, and no jaundice present, I believe it is generally recognized that the indication is for extirpation of the gall-bladder, if it can be done. Extirpation of the mucous membrane is the most that could have been done here, and that would not have improved matters.

Gall-stones in the common duct, around which dilatation had occurred, might permit a free passage of bile, but it is difficult to conceive how it would be possible for so much inflammation to occur without jaundice primarily. Unless the mucous membrane explanation is the correct one, it is hard to understand. I take it, no bile came through the opening. The drainage would have tended to reduce rather than increase the swelling.

Dr. McMurtry (closing): The patient gave a positive history of absence of jaundice. After the operation there was just enough bile flowing to discolor the gauze during the first day, and none afterward.

PROSTATECTOMY: TUBAL PREGNANCY.

Dr. Irvin Abell: At the last meeting I discussed the subject of prostatectomy in connection with a case of an old man, 63 years of age, who had been troubled with prostatic obstruction for eight years. He had gone the rounds and a number of the members of the Society saw him. I first saw him last March and this morning I operated on him and removed these sections. The left lobe was found to be much larger than the gland itself. I do not believe the third lobe is ever present except as the result of hypertrophy. The operation required but fifteen minutes, and on searching the bladder I found two small stones. In grasping the stones I broke one into a number of small pieces, and it took longer to get that out of the bladder than it did to remove the prostate. I wished to be absolutely certain that no piece was left in the bladder. He stood the operation nicely. The incision was made on either side of the prostatic urethra.

This other specimen was removed from a woman 31 years of age, with a perfect history so far as menstruation was concerned, but she had one miscarriage about four years previous. Her period began three weeks before I saw her and continued during that time. She had a well marked mass in the cul-de-sac and the uterus was pushed well up in front. The rupture occurred through the outer fallopian extremity. She made a good recovery, the wound healing perfectly, but I had some trouble with the pedicle ligature after three weeks. Catgut was used except on the pedicle. The discharge has now ceased.

DISCUSSION.

Dr. Louis Frank: I saw a part of the operation of prostatectomy and was struck with the rapidity with which it was done, but not with the apparent ease. When one is working entirely in the dark it is difficult to get into the capsule and enucleate the gland.

The other seems to me to have been an attempt at abortion.

Dr. A. M. Cartledge: As to the ligature proposition, I still believe silk is the safest thing for most of the ligatures of the broad ligament. I was struck with the fact that he used a small cigarette drain. I think that was more responsible for the subsequent trouble than the ligature.

Dr. J. B. Bullitt: I saw the first case sometime before the operation, and made a skiagraph which showed the stone indistinctly, and I was not satisfied with it. There seemed to be the

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shadow of the overlying prostate on another shadow. I tried to get the man to come back for another trial, but did not succeed. Certainly this was the operation indicated for a man in that condition. If any of them are to succeed, his would seem to be of that class. From what we have seen here of the work of Dr. Abell in this line, we ought to feel encouraged in regard to this operation.

Dr. W. O. Roberts: I would like to ask Dr. Abell to tell us the results of the former case reported by him.

Dr. Abell: The results were good. He has regained his bladder tone and sleeps well at night. He had been using a catheter for six months and passes his water, but cannot retain it more than two or three hours.

Dr. W. O. Roberts: I have had one case in which I removed the middle lobe. He had not been able to pass his water at all for several months, and after the removal he was able to pass it very well indeed. But only one lobe was removed in that case.

Dr. Irvin Abell (closing): At the last meeting reference was made to the operation of Dr. Senn in his recent article, and though I have never used his incision, it has been my experience that it is impossible to get the fingers in. The enlargement of the gland encroaches upon the urethra so that it is absolutely impossible to introduce the finger into the bladder. In this case I was unable to get any steel instrument in it at all, and I was uncertain about the stone until after the removal of a portion of the prostate. It may be possi- to do this by using the Y-shaped incision, and I intend to try it if I get another case at the hospital.

Dr. Irvin Abell contributed a paper entitled "Fractures of the Skull." See page 249.

DISCUSSION.

Dr. J. Garland Sherrill: I can only commend what has been said on the subject. The symptoms of fracture of the skull are not always such as to aid us in making out the injury. I am convinced that there are many serious injuries to the brain without marked symptoms. The term concussion of the brain, I think, should be replaced by contusion. Formerly it was intended to cover cases of shock, without brain lesion, and we now know that in every case of concussion we have minute hemorrhages in large portions of the brain tissue. It is true, we have cases of slight jarring of the brain which gives the symptoms of shock. We are agreed that in every case of head injury we should not give a good prognosis, neither should it be too grave.

In regard to diagnosis of injuries of the skull, I think we should care less about the injury to the skull and more about that of the brain.

There are two symptoms I would like to mention, one being the point of special tenderness elicited over the line of the fracture. I have elicited the "cracked pot" note in one or two cases, and when we get that we may be sure there is a fracture.

I think Dr. Abell's position in regard to treatment is very good. If there are symptoms indicative of fracture, we should be allowed to open the scalp and search for it. If we believe there is a hemorrhage, we should open the skull, because many such cases result fatally. In all cases of compound fracture the operation should be done early, for this gives the best results, immediate and remote. The longer we wait the greater are the chances of death, and when recovery occurs functional disturbances are more likely to result.

In those cases of fracture at the base of the skull, the question arises whether it is wise to submit the patient to an operation where the symptoms are very marked and death likely to ensue in any event. In such cases the surgeon must decide, and the reputation of the surgeon and of the profession should be cast aside if there is any hope of relieving the symptoms.

Dr. J. B. Bullitt: I think a better title for the essay would have been

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"Head Injuries," because some of the symptoms he discusses are not dependent upon fractures, such as intracranial hemorrhage. I remember distinctly the case of the paper-hanger. I saw him that afternoon and the injury seemed to me very trivial. I advised them to put him to bed and keep him quiet. The next morning he was in a profound coma, with a slow pulse, suffering from compression, and before the ambulance could get there he was dead. The lesson I learned from that case was that we should not make light of any head injury. He should have had more attention, but most of us would have acted in the same manner.

In regard to the other injuries, there are two classes, one of which is very difficult to determine. In cases where there is a palpable head injury with probably hemorrhage in small quantities over a large area, it is very difficult to decide about operation. Cases of this kind generally have to be let alone. I remember the case of a man who got his head between two cars. There were no frank symptoms of any kind, but he had a violent headache, some flightiness, but no paralysis or dilatation of the pupils. We thought it best to leave him alone. At the same time another man had received a crushing blow from a fly-wheel and he recovered under immediate operation. The other did not recover for months. Fractures at the base of the skull were not dealt with by the essayist, so I will not say anything about that subject.

Dr. H. Horace Grant: In the case of simple fractures without symptoms of pressure, I think it is safer to let them alone. No one can question the danger of converting a simple into a compound fracture in this region. This danger is always present in spite of any amount of care in technic, and infection is perhaps the gravest danger of all. I should hesitate to make a compound fracture under such circumstances.

Dr. Louis Frank: I have been especially interested in the paper, as I have seen three cases in the last four days. I agree with everything that Dr. Abell has said and believe that his conclusions are proper and generally accepted. In cases where we can localize the lesion I think we should operate. Even very slight injuries may prove fatal, and vice versa. I remember the first head injury I ever operated upon. The fracture had been received four or five months previously and he was operated on with marked symptoms of pressure, which had come on very gradually. He had a very slow pulse and respiration and was completely unconscious and had a comminuted fracture two inches across, the bone being driven into the brain substance. He made an excellent recovery. I saw another case recently of a child which had fallen through a flight of stairs, dropping two floors. It was completely unconscious and had every evidence of compression. After being sent to the infirmary it regained consciousness and we decided to wait. The next morning it was running about and has had no other trouble since.

The other night I saw a man in Indiana who had received an injury ten days previously. He was struck in a fight and knocked to the ground. He tried to get up, but could not, and was carried to a neighboring place. He had complete hemiplegia, but had not lost consciousness, and in a few days there was a partial return of function in the leg. On the day I saw him he was beginning to be delirious and was at times unconscious. He had no pupillary signs at all. He could be aroused and would answer questions by a nod. I believe he had hemorrhage in the brain substance, probably about the internal capsule or basal ganglia. I gave no promise of relief either with or without operation, so the family decided against it. Ten days later he died.

I saw another case Saturday afternoon. A man had received an injury from a flying stone, a compound fracture with a depressed fragment. I put him under chloroform and shaved his

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head. He had complete hemiplegia with all the symptoms of compression. This fragment was removed, with immediate relief to the paralysis; his pupils responded, he came out from under the chloroform and could be aroused. I heard to-night that he had passed away.

The last man had no injury under the dura and there was immediate relief of the symptoms upon removal of the pressure, but he died later. He had received morphine, which is bad in head injuries, and is the cause, in my opinion, of many deaths.

Dr. W. O. Roberts: I agree perfectly with the essayist in his deductions, that all cases of compound fracture of the vault of the skull should be operated on, with or without symptoms. All depressed fractures should be relieved. In all cases of linear compound fractures, the great danger is that of infection, and in such cases the line of fracture should be grooved, so as to properly cleanse it. Punctured fractures should be trephined at once, no matter how small the puncture may be. I do not think compound fractures of the base of the skull should always be operated upon; wherever there is evidence of an accumulation of blood, trephine. I can recall a number of cases of compound fracture of the base of the skull where there was hemorrhage from the ear, and even escape of brain substance, that have gotten perfectly well.

I do not believe with Dr. Sherrill, that in all cases of severe concussion there is necessarily laceration of the brain, because I know of many which have recovered rapidly and perfectly. It is astonishing to see the effect of concussion on the memory at the time and following the injury. A very interesting case occurred several years ago, in a railroad man who was lost at Anchorage. The train backed to the station and picked him up; they found him sitting on the platform, and I saw him an hour or two afterward. He had his head resting in his hands, and presented several scalp wounds, but no evidence of fracture. I asked him where he lived, and he said on Wenzel and Jefferson, but his friend said he lived on Washington street. Then he said himself that was true, that he formerly lived at Wenzel and Jefferson. When I took him home, he said we would go in on the side porch, and told me to wait while he went in and got a lamp. I heard him ask his father about the lamp and matches; he lit the lamp and opened the door for me. I put a bandage on his head and left him. When I went back the next morning I found he did not remember a thing after the engineer had blown for brakes and he started to climb up the ladder, and could not understand about his head being bandaged. He had no trouble subsequently, and I know of a number of cases similar to this. In these cases of fracture at the base of the skull there is great danger of infection, and the only means we have of preventing it is by cleansing and disinfection through the auditory canal and the nares. There is also danger of infection through the eustachian tube.

Dr. Thos. L. Butler: I believe we err more often in the direction of conservatism than in taking radical measures. In the case of a linear fracture, even though it occur without symptoms, I believe the skull should be opened for examination. I take issue with Dr. Roberts and agree with Dr. Sherrill that whenever we have symptoms of concussion there is an injury of some sort to the brain. I think most of the later authorities on the subject recognize this. Bearing upon the point of exploratory operations in these minor injuries, I recall a little boy who fell off a fence and had symptoms of concussion, being unconscious for about a minute. He walked home and about an hour later began having convulsions. I had him taken to an infirmary and on the way he became comatose. When we made an incision over the seat of the injury we found no fracture at all, but his condition was such that

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we felt justified in opening the skull. No clot was found, but there was a bleeding vessel. It was fortunately under the opening made by the trephine. He had no further trouble after he came from under the anesthetic.

I recall another case of a prize-fighter who was struck on the head and had no symptoms at first at all. He developed some trouble three weeks afterward, which progressed into a comatose condition. On operation we found that he had a simple linear fracture without depression with subdural abscess. This was drained and he improved. A month later another abscess developed, operation was refused, and he died.

I have seen a number of cases in hospital work in which there were no symptoms at all. In one case that of a white man with hemorrhage from the nose. The only other symptom of trouble was that he was talking a little wild. There was no paralysis. We cut down over the injury and found a very marked fracture, extending to base and opening through nose; this was packed off with gauze and drained, with recovery.

I have seen a number of these cases with apparently little external injury, but upon investigation serious conditions were disclosed.

Dr. J. B. Bullitt: I would like to ask what he would propose to do if he did cut down and found a linear fracture? What good would have been accomplished? What would he propose?

Dr. Abell (closing): I agree with Dr. Frank, that his case was one of cerebral hemorrhage. The meningeal symptoms are always slow, while the cerebral appear at once. The hemiplegia appearing at once would corroborate this, and I doubt if anything could have been done. I thank the gentlemen for the discussion, and have nothing to add.

EXHIBITION OF NEW INSTRUMENTS.

Dr. Lederer: I have here a modification of the Bennett inhaler devised by Dr. Gwathney. Since we have had it I have given six anesthetics and found it entirely satisfactory. We have done away with the preliminary fighting, as well as with the nausea and vomiting. There has been none except in the first one or two and I attribute that to inexperience. Dr. Gwathney claims he never has this trouble and his patients go directly into the surgical stage of anesthesia. He thinks this is due to the small quantity of ether given. Our operations were of short duration; two iridectomies in which anesthesia was indicated, two were enucleations, and two were removal of adenoids and tonsils. In the removal of these in children it seems to have a distinct place, because the gas method does not give us sufficient time. There is nothing about it that cannot be boiled, and it can be used with any of the combinations. It is the simplest I have seen. The average time required for coming from under the influence of the anesthetic has been five minutes; Dr. Gwathmey claims three minutes. With two exceptions my cases were adults.

DISCUSSION.

Dr. J. B. Bullitt: I have tried my hand at the invention of these devices, but the older I have gotten the fewer I have invented. The simple Esmarch is the most satisfactory I have ever used. I think it is more important to have a well differentiated inhaler for chloroform than for ether, and if this can be arranged for chloroform it will be extremely serviceable. I do not believe it is any more satisfactory than the other way. I know one woman who has given the anesthesia eight thousand times, and from three to five minutes is her average for inducing anesthesia. She has no stage of excitement.

Dr. W. O. Roberts: I had an interesting case last week. Last Thursday a boy was brought to Norton Infirmary after a runaway. I do not know whether the wagon ran over him or not, but he was unconscious, with a feeble pulse. Strychnia and morphine had been given him before he reached the infirmary. He got there within half an hour after the accident, and we

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waited half an hour longer and the pulse came up, and then we went on with the examination. He had a chunk out of the lower lip, a scalp wound, a fracture of the left clavicle, and some emphysematous condition of the chest, in front and behind, and was pretty badly bruised. He was treated in the usual way, and when he came out from the chloroform he seemed to be perfectly conscious. He was brought in at 6 o'clock, and I was with him until 9. The next morning he seemed bright, but the emphysematous condition had increased. In the afternoon I was called, and found he had great difficulty in breathing, but after lifting him up it became easier. His pulse was then about 100, with good volume. This difficulty in breathing seemed to be due to pressure upon the trachea, and there was dullness at the base of the lung. I had Dr. Lederman see him with me, and he examined the larynx. The next morning he could breathe better, but that afternoon he got worse and died. We had given him oxygen with some relief. The question of tracheotomy came up and was deferred. The post-mortem showed one point of great interest, that the fractured end of the clavicle had wounded the lung.

Dr. Lederman: We had permission to do only a small amount of post-mortem examination, but succeeded in exposing the lungs, and the first thing we examined was the left apex. We found an injury there, evidently where the end of the clavicle had pierced it. We could palpate the ends of the clavicle and the location was where we expected the injury to be. We found both bases solid, and both apices were edematous. The adhesions were the most extensive I had ever seen. I opened the trachea first and found the mucous membrane edematous from the vocal cords down. So tracheotomy would have done no good. I found nothing in the examination of the larynx referred to. The vocal cords were white and there was no serious trouble there.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Postponed Meeting, Friday, October 16, 1903, with Dr. Ben Carlos Frazier, President, in the Chair.

TUMOR OF THE BREAST.

Dr. L. S. McMurtry: I present here a specimen of tumor of left breast removed from a woman 43 years of age, married, presenting the classical history of malignant disease of the breast. She discovered a lump in the breast which gradually enlarged. After a short time an additional lump appeared. The family history was very marked; her mother died of cancer of the breast, her maternal grandfather of cancer of the face, and one of her grandmothers of cancer of the uterus. There was no involvement of the axillary glands, but I advised excision of the breast on account of the physical signs and the family history. This was done the day before yesterday and the entire breast removed. It was found to be a cystic degeneration of the breast and I considered the operation proper on account of the history and the tendency of these structures to undergo malignant changes. The fluid was clear. In a case like this there is no way to be absolutely positive by the clinical signs presenting. I will make a further report after the specimen is hardened.

SUBMUCOUS FIBROMA OF THE UTERUS.

The second specimen is the result of an operation done on July 16 last. The patient was a woman of 41 who had been the subject of uterine hemorrhage for weeks and was greatly emaciated, almost exsanguinated. She was brought to my private hospital with the diagnosis of cancer of the uterus. She had the cachectic appearance with persistent hemorrhage and a distinct tumor. Upon examination I found she had a submucous fibroma of the uterus partly extruded into the vagina. I found it impossible to ensnare the tumor in the usual way and remove it. When I cut down upon what I supposed to be the pedicle, I discov-

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ered that the tumor occupied the entire cavity of the uterus, and sprung from the fundus of that organ. I had to complete the operation by vaginal hysterectomy, as the growth could not possibly be removed from the uterus. She made an easy recovery, and when I saw her two weeks ago had gained twenty pounds.

DERMOID CYST OF THE OVARY.

I present another specimen to illustrate one point. It is a dermoid cyst of the right ovary, with a lock of hair presenting. The interesting feature is that the left ovary, though almost normal in size, shows the same character of growth in its incipiency, with hair showing. The patient is a Jewess, 33 years of age, married, with three children. Both tumors were removed by abdominal section, and she made an easy recovery.

DISCUSSION.

DR. AP M. VANCE: It has been my fortune on half a dozen occasions to remove a cystic breast, thinking it to be malignant. I have always thought I did right, according to the old surgical rule, that in a woman past 30 these tumors should be considered malignant. I was very much surprised the other day in reading an article by Abbey, to find that he advises against excision. He taps all tumors to see if they are cystic, and, if so, treats them by injection and aspiration. I cannot agree with his treatment, because I believe that any tumor with fibrous structure should be removed on account of its tendency to take on malignant character, particularly if the woman is over 30.

The third specimen is interesting to me on account of this small ovary. I have begged for the second ovary on numbers of occasions and the woman has been blessed with offspring afterwards. In one multilocular case we discussed the advisability of taking out the other; it was not done and she had a baby afterwards. We should think twice about leaving them. On several occasions where I took out only one, I had to go back afterwards and get the other. Dr. McMurtry did right in removing both of these.

DR. LOUIS FRANK: I can heartily agree with what has been said. I personally believe that it is good surgery to remove all tumors of the breast except lipomatous tumors; fibroid and cystic growths should be removed. Nothwithstanding Dr. Abbey's article, I think this is especially true where the gland structure itself is involved, for when it becomes diseased it is very apt to take on malignant degeneration. These tumors sometimes exist for years and then become malignant. The exact relation between benign and malignant tumors is not yet clearly understood, but possibly there is a definite relationship. Dr. McMurtry did in this case exactly what I would have done.

As to the second case, I can endorse what he has done even without the excuse of the broad attachment of the tumor itself. Possibly many of these tumors can be removed without seriously risking anything and without great danger to the patient's life by hemorrhage or infection. In a woman of this age and a tumor of this size, it is best to remove it by hysterectomy. The frequency of multiple nodules is so great that we cannot say when we have one kind and when another. At the same time, in a young woman who has not borne children, it is very desirable to leave the uterus. In a case of this sort, and possibly in all cases, it is proper to remove the uterus itself.

As to the third case, I am like Dr. Vance; it is a question what is best to be done. Where there is one healthy ovary, under certain circumstances it is worth a trial and perhaps best to leave it. But in the case of cystic growths in the ovary, it is a question whether it is not best to remove both sides. In the cysto-adenomata, I am convinced that is the best thing to do. In a sclerotic ovary it is the proper thing to do, and and I believe it is proper in this class of tumors. I have seen tumors as small as this removed from an ovary that was

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apparently healthy. If there is no valid excuse for leaving it, I should think it ought to be removed also, though apparently healthy. In many cases it will be found after removal that degeneration has already begun. In probably 10 per cent. of cases of cystic growths of one ovary, the other is also diseased at the time of the operation.

Dr. W. O. Roberts: In reference to the tumor of the breast, I believe it is a good thing to remove them, young or old. This case recalls to my mind another, some years ago, a woman 50 years of age with a malignant tumor of the right breast. I removed it, and two years afterward she came back with a tumor in the other breast. (The first was scirrhus.) The second was promptly removed, and a great part of the tumor proved to be a cyst filled with a milk-like fluid. There was also some solid substance which the microscope showed to be malignant. In young subjects, where from its history it seems to be a simple adenoma, I do not believe it is necessary to go into the axilla, but the tumor itself should be removed lest it become the seat of a malignant growth. I agree with Dr. Frank in what he said in regard to the second ovary.

Dr. McMurtry (closing): The intelligent laity thoroughly understand that it is the routine practice of the surgeon to remove all tumors of the breast. I believe that we should always inform our patients when a suspected tumor proves to be not malignant. Sometimes a surgeon, who has informed the patient that she has malignant disease and removes the breast, finds himself reluctant to backtrack and tell her after operation that it is not. But the patient afterward lives in constant apprehension of its recurrence. Hence I believe the surgeon should let her know when the microscopic examination shows the tumor to be benign.

Strangulated Hernia, with Fibroid Tumor of the Uterus.

Dr. W. O. Roberts: A week ago yesterday I saw a case in consultation with Dr. Wilson; the woman had been the subject of hernia for many years and symptoms of strangulation came on Monday. He was called Wednesday and I saw her Thursday afternoon. Upon examination of the case we found that she also had a large fibroid tumor of the uterus, which she said had been there long before old Dr. Brandeis died. We got the consent of the patient to operate for hernia, but the fibroid is still there; the belly is full of it. She is 74 years of age and says she does not think it has diminished at all since Dr. Brandeis recognized it many years ago. So these growths do not always diminish with age.

Locomotor Ataxia with Optic Nerve Degeneration.

Dr. J. M. Ray: About nine years ago I saw a gentleman, then about 35 years of age, married, with family, who came to me with eye trouble. Upon examination I found a partial paralysis of the third nerve, no other eye symptom. He had a little local trouble once, but his doctor said it was not syphilis. The eye paralysis lasted several months and disappeared. Then ataxic symptoms began, and have now increased until the man is a confirmed ataxic. He was treated here for a while and then in another city. He has improved; at one time being unable to walk, he can now get around. He returned home and came to me complaining of his eye. He said he had been told that the trouble in the eye did not amount to anything, but I found atrophy of both optic nerves, with a vision of 20-70 in one eye and 20-100 in the other.

Sometime ago I had a number of cases of optic atrophy on hand with no other symptom, and I looked up the neurological side of these cases. I found that the majority of cases of atrophy of the optic nerve in people past 35 is the result of sclerosis, posterior spinal or multiple. Writers on the subject state that frequently after symptoms of atrophy show themselves, the ataxic symptoms lessen or disappear, this is known as Benedikt's Law. When atrophy of the optic nerve starts

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late in ataxia, the prognosis is bad as to the sight. According to this, the improvement in this case was probably due to the fact that his optic nerves had become sclerosed, and the improvement of his gait has thus followed. I have never seen a case follow this course exactly.

DISCUSSION.

DR. S. G. DABNEY: I think the eye symptoms usually occur early. Most of these optic atrophies occur early. It is well recognized that the more the optic nerve is involved, the less are the ataxic symptoms; the greater the impairment of sight, the less the impairment of gait. As a rule, such cases do not have ptosis. Partial paralysis, producing a fixed pupil or diplopia, or both, are more usual. This case comes pretty near being a paralysis of the entire third pair, but it is more common to have only one or two of the fibres involved. I think I know the gentleman referred to, and I am pretty sure the case is syphilitic.

DR. J. B. MARVIN: I have been under the impression that there were two groups of eye symptoms in locomotor ataxia. There are certain symptoms like ptosis, strabismus and oculomotor palsies, which occur early, may be very transient, and disappear as the ataxia symptoms supervene. The stiff, contracted pupil and even optic atrophy may be early symptoms, but as a rule occur in later stages. It is well known among neurologists that the more marked the optic atrophy the less severe the ataxia symptoms will be.

As to the improvement in the ataxia symptoms here, I think the doctor is entitled to some credit for his treatment. Locomotor ataxia is always characterized by periods of remission, sometimes for months or years. Freedom from pain and improvement in gait come on and it requires a practiced eye to note them. The methods used have evidently done the man good. The chances are that he will go blind, but he has been benefitted in one sense by the treatment.

DR. J. A. OUCHTERLONY: I want to call attention to the fact that, as in so many other chronic diseases, there are periods of remission and exacerbation, which is certainly true in the case of locomotor ataxia. It is frequently the case that a physician happened to get hold of a case in the incipiency of one of these periods of remission and flatters himself that the improvement is the result of his work when the improvement continues. But, of course, after a while there is a return of the disease; but these remissions occur often enough for the man to get credit for something for which he is not responsible.

DR. RAY (closing): Just one point. We are all familiar with cases in which optic atrophy is the first symptom of tabes. I reported this case to illustrate the fact that when the optic nerve symptoms began to develop, the ataxic symptoms began to lessen. The statement has been made that in disseminated sclerosis optic degeneration stops and does not go on to complete atrophy of the nerve. I think I have a case of that kind on hand now. While in posterior sclerosis the optic nerve atrophy usually goes on to blindness.

The essay of the evening was read by Dr. H. Horace Grant, entitled "Abscess of the Brain." (See page 245.)

DISCUSSION.

DR. J. B. MARVIN: It is a subject of special interest to me, and I have had to study the surgical aspects because medicines are no good at all. Dr. Grant limited himself by ruling out all otitic, nasal and septic cases and confining himself to those due to trauma. As to the symptoms of abscess of the brain, from the few cases I have seen and what I have read, I do not believe the symptoms are characteristic. If you have a combination of symptoms with a given history, you can make a good guess at it, but the symptoms are not pathognomonic. You have, first, headache, which is a very uncertain factor; next, the point the neurologists put more stress upon is the change in the mental attitude of the patient.

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This is a difficult question for the doctor to determine unless he knows the man personally. Abnormal temperature is a very uncertain matter and very misleading. Facial paralysis, optic neuritis in a patient who has had injury of the head, or chronic otitis media, should awaken suspicion of abscess. There are three conditions about the brain you have to deal with, meningitis, abscess and thrombosis of the lateral sinus, which give very similar symptoms.

Percussion and auscultation of the head is a difficult matter, and is best done with a stethoscope placed over the forehead. There must be no hair under it, and the percussion should be done with a rubber mallet. The percussion may evoke a change in pitch or note, and may also provoke sensitiveness. Abscess may single or multiple. In four-fifths of the cases it is single. The abscess may be latent, and if in the "silent" area of the brain give no symptoms. If in the motor region, there are well marked localizing symptoms. The majority occur in the temporo-sphenoidal lobes. In the temporal lobe a man may have what is called optical aphasia. I see that bottle, and I know what it is. It is claimed that in the first two temporal convolutions there is the center which has to do with words heard; you mention the word bottle, and I get a picture on the brain of what it is. In the occipital lobes you have another center which has to do with the memory of objects and words seen. Abscess of the brain most frequently affects this region, though it might be somewhere else, of course. Taking this region, you cover a considerable portion of the brain. A man with abscess of the brain in this region might tell you a knife is used for cutting, but may have forgotten its name. This condition of optical aphasia is due to a suspension of function of an association tract lying in the temporo-occipital lobes and is of great value in locating an abscess in this region.

Another point: Oppenheim has collected sixty cases of abscess of the brain from trauma, with thirty-eight recoveries after operation. He reports 196 cases following ear lesions, with ninety-six recoveries from operation. Star reports sixty-five cases, with thirty-four recoveries from operation. Granted that there are three conditions to be dealt with, all three are fatal if left to themselves. No matter whether the diagnosis has been made or not, surgery is justifiable. If he has meningitis he will die, whether he is operated upon or not. It is well enough to limit that to this extent; we have all seen cases of meningitis get well, but genuine meningitis will kill the patient. So there is no harm done by the operation if it proves to have been meningitis.

Dr. Grant spoke of aspiration. I would speak with all humility on surgical questions, but there is one thing I thought of, that these single abscesses of the brain are always of one or two varieties, either with a pocket of pus, with a lot of broken-down brain material, soft and mushy; but the majority of times a sort of fibrous material has been thrown out and become encapsulated, different from the ordinary brain tissue. If a small needle be pushed in slowly, would it not push that material before it without puncturing it? Horseley, who has done a great deal of brain work, has an instrument which it seems to me ought to be better than that. It is like an ear speculum, with sharp end, with a scissors handle, which he pushes in and opens as he goes on. This can be gently pushed into brain tissues without incising the blood vessels, the resistance of capsule felt and parts inspected before incision. While you have the bone open it is extremely important to find the abscess and relieve it, for if it bursts before it is drained your surgery will be unavailing. I apologize for entering the domain of surgery in the discussion.

Dr. J. A. Ouchterlony: I have nothing to say about traumatic abscess of the brain, but after hearing Dr. Marvin I remember a case of abscess of the brain in a patient who had abscess of

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the liver, which was aspirated and got along remarkably well for three weeks. Then all of a sudden she became comatose, and, after lingering a while, died. I made a post-mortem and found that the abscess of the liver had healed so nicely that the cavity which contained over a pint had contracted to one holding only a teaspoonful of what was formerly called "laudable pus." Upon examination of the brain, I found an abscess of the left hemisphere. The point to which I want to call attention is that there was a capsule. However, it was not so thick as to make it difficult for an aspirator needle to penetrate it. It was quite yielding.

Another case of suspected abscess of the brain Dr. Vance saw with me, in a young woman with abscesses in the lungs. All of a sudden she complained of headache, had a rise of temperature, became comatose and died. Diagnosis of abscess of the brain was made, but no post-mortem was permitted.

I wish to mention one point in connection with the frequency of abscess of the brain. For a good while I was pathologist to a general hospital during the Civil War, where we had a capacity for 1,200 patients. Large numbers were frequently brought in and then sent away, so in a year there were a great many more than 1,200 cases. There was a heavy mortality. Many came in wounded, but most of them were suffering from some form of disease. However, I cannot remember to have found a single case of abscess of the brain, although the number of post-mortems varied from three to six per day, and almost every case that died was subjected to autopsy.

At the City Hospital, in Louisville, at which I was pathologist, we did not have a single case of abscess of the brain of any kind among those subjected to post-mortem, except the one alluded to. It was remarkable that there should have been such scarcity.

Dr. Taylor: I have seen more brain abscesses than anything else. I want to speak of a case I made a post-mortem on in Mississippi, and from what I have seen and have read, it seemed to me impossible for such a condition to have existed. I saw only the post-mortem. The man had been shot four months before, and the bullet went in above the orbit of the right eye. After being in bed a week or two he got up and went to work. Four months after being shot he went to a negro dance, fell in a fight and died that night. It was found that the bullet had passed nearly horizontally across the brain and had gone almost through. The brain, for an inch or two on each side of the track, was about like soft putty. The abscess cavity extended entirely across the brain, and was about as large as my finger. I cut down on the brain and found the bullet. The track contained pus.

Dr. J. M. Ray: I would like to report a case bearing on Dr. Grant's paper. A man came to the University dispensary with evidence of cellulitis of the orbit. He had no fever, no particular headache, and no history of trauma. The cellulitis gradually increased. The eye became fixed and exophthalmic and he began to complain of headache, but still no fever. The swelling of the lid and protrusion of the eye became so great that I thought I could detect fluctuation in the orbit. The ophthalmoscope showed no signs of optic neuritis. On Monday last he came back to the clinic and was admitted to the University Hospital about 12 o'clock. I made an engagement for 4 o'clock, intending to make an incision and thinking I would find pus. About 3:30 the nurse telephoned me the man was unconscious; Dr. Lederman and I went down and found him comatose, pulse full and temperature nearly 101°, with no history of a rigor. The only history we could get was that after being admitted he was put to bed and about an hour later the nurse found him on the floor unconscious. He had gotten up to empty his bladder and in stooping over had fallen on his face and lay there until the nurse helped him back. He never regained consciousness. When I saw him an hour later, I thought we

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ought to do something. Dr. Lederman made an incision through the upper lid and enlarged it with the forceps and went down between the eyeball and roof of the orbit, but did not find pus. It bled freely. We dressed the wound and the man died about midnight. The next afternoon we made a post-mortem and found the following conditions: The cellulitis was on the right side. On the under surface of the middle temporal lobe was an area of soft and discolored brain tissue. On cutting into this area we found an enormous clot filling the lateral ventricle on that side. There was no evidence of pus in the orbit. It was a puzzle to me exactly when this hemorrhage had taken place and the cause for it. I had questioned him carefully about trauma, but if it was the cause it was probably received while on a spree.

Dr. S. G. Dabney: I believe the negative finding of the ophthalmoscope does not mean much in brain abscess. My recollection is that the fact of finding the eye to be normal is not evidence against the existence of the disease. In brain tumors choked disc is found in 66 per cent., but its absence is less significant in brain abscess.

Dr. Grant (closing): I am much obliged to Dr. Marvin for his amplification of the idea I had when I wrote the paper, that the diagnosis is difficult and that the condition is more frequent than generally supposed. If it is a fact, as estimated by Holmes, that one out of five hundred deaths is due to abscess of the brain and that 33⅓ per cent. of this 1 per cent. is due to traumatic abscess, it shows that it must be more frequent than it is believed to be. In view of the fact, as presented by Dr. Marvin, that the diagnosis is difficult and the symptoms are not positive, but very suggestive, I was led to emphasize the point that when these are clearly made out and studied with a view to locating the abscess by study of the cerebral localization, exploration is imperative. As only a very few cases can be reported by those present when we know that many have existed, we can see the importance of these suggestive symptoms. I only intended to present the suggestive points and show that the condition is very frequent, and that it is our duty in these traumatic cases not to allow our attention to be diverted from the possibility, but to look upon it as suggestive. When we bear in mind that all of these cases are fatal under the expectant plan, and add the reflection that 75 per cent. will recover in the hands of a skillful operator, the importance of exploratory operation becomes evident.

If it is a fact that traumatic abscess is as common as represented, and that a positive diagnosis is difficult, the significance of the symptoms noted should be most patiently studied.

As to the technique of the operation, I reported the suggestions made by Holmes, Jacobson, Keene and Fenger. The method of exploration suggested by Dr. Marvin is one which did not come under my observation. I am inclined to think that a hypodermic needle of good size would be likely to find most of these abscesses. Jacobson advises introducing the needle a quarter of an inch and aspirate, and then go further on if necessary, with sufficient firmness to meet any resistance.

As to the treatment of the abscess after it is found, of course the aspiration is entirely incomplete. It is only for diagnosis. Drainage should be thorough, with the drain remaining in until it is accomplished. If any symptoms of retained secretion occur during the apparently favorable progress of the case, the operation should be repeated if needed or the drain carefully looked after.

I am firmly convinced that the fault in not securing permission to operate in these conditions is largely with the surgeon, rather than with the patient or his family. If these patients, in whom lesions are suspected, are properly approached, and we have confidence in our own powers, we can nearly always get their consent for the exploratory operation.

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Louisville Monthly Journal

OF MEDICINE AND SURGERY.

"Alis Volat Propriis."

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EDITORIAL STAFF.

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OCCIPUT POSTERIOR POSITION.

So much has been written lately upon this obstetrical complication that a few words upon it should not be considered inappropriate. There are few conditions which, when neglected, may result as seriously to both child and mother.

But few conditions require more care and discrimination in diagnosis, prognosis and treatment, and especially would we emphasize the importance of careful and accurate diagnosis. This frequently, in neglected cases, is most difficult, especially if the head has engaged and remained long in that position, because of the size and thickness of the caput. If it is impossible to reach or distinguish a landmark upon the vertex by the introduction of two fingers, the patient should be anesthetized and the hand introduced into the vagina, and a thorough examination made of the head in order to locate the anterior or posterior fontanelle, this being confirmed by palpating an ear.

We would emphasize the absolute necessity of careful diagnosis in delayed vertex presentations before assistance is rendered by the application of forceps. Great damage can result to the maternal soft parts, nay, will always result, when the head is drawn through with the occiput posterior, not to mention the possibilities of damage to the head.

Knowing so little as to the causation of this position, prophylaxis is merely conjectural. When once recognized, and it should always be suspected when there is no progress after a long second stage, an effort should be made to correct the position, remembering the damage sure to result if delivered as a posterior.

The earlier recognized, and the higher above the brim, the easier it is corrected. If high in the pelvis, rotation by the finger before a contraction, the position being maintained during a pain, will usually result in engagement in the normal anterior position. If low, rotation may be accomplished in the same manner, but usually the application of the forceps, which can be easily used as a rotator, its removal and reintroduction of its blades in the anterior position, will result most favorably.

We would urge the importance in all cases of accurate diagnosis, especially in delayed vertex presentations, and careful, skillful manipulations when the position is posterior.

Notes.

A MANUSCRIPT, entitled "Albuminuria and Eclampsia, with Reference to Treatment," has remained in our hands, awaiting publication, until the writer of the article could be identified. No name is on the MSS., and all letters and papers connected therewith have been misplaced. Should the writer of the article see this, please write the the editor at once.

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Dr. Benj. Merrill Ricketts, of Cincinnati, has a book in press by the Grafton Press, New York, on The Surgery of the Heart and Lungs, illustrated with 140 illustrations. It will appear about January 1.

The committee appointed at Memphis to select the next place of meeting for the Mississippi Valley Medical Association has chosen Cincinnati, Ohio, and October 11, 12, 13, as the dates. Dr. B. Merrill Ricketts has been appointed Chairman of the Committee of Arrangements.

French Lick Springs, Ind., Hot Springs, Ark., and St. Louis, Mo., were also considered.

At the recent meeting of the American Public Health Association held at Washington the Committee on Vital Statistics reported that effective co-operation had been instituted between that Association, the Conference of State Boards of Health, the American Medical Association, the United States Census Bureau and the United States Public Health and Marine Hospital Service for the improvement of the vital statistics of this country. Among the objects sought are the extension of adequate methods of registration, the use of uniform and comparable tables and rates in bulletins and reports, and the improvement of the international classification of causes of death. A pamphlet on "Statistical Treatment of Causes of Death" has been issued by the United States Census Bureau, requests for which should be addressed to Mr. W. A. King, Chief Statistician for Vital Statistics, Census Bureau.

It has special reference to the difficulties encountered in compiling deaths returned from several causes, and asks for the co-operation of the profession in framing a thoroughly satisfactory method of procedure in such cases.

Dr. James Morrison Bodine and Mrs. Laura M. Williams were quietly married at the residence of the bride, 110 West Ormsby, on November 25th, 1903.

This announcement will come as a surprise to the alumni of the University of Louisville, of which Dr. Bodine has been dean for so many years, as it is to his many friends in Louisville.

An ante-nuptial agreement was filed in the County Court the day before the wedding in which each participant disclaimed any right over the property of the other.

County Societies.

HARRISON COUNTY MEDICAL SOCIETY.

The Harrison County Medical Society met at 7:30 p.m. at the office of Dr. Joe Boyd, Cynthiana, Ky., on October 6, with fifteen members present.

Dr. Joe Boyd reported an interesting case of complete hernia of right side in a child 14 months old, which had the characteristic appearance of hydrocele coexisting with the hernia.

The hernia being irreducible, operation was necessary to overcome the strangulation. The hernial sac was brownish red in color and fluid in the scrotum. This fluid was removed, then the hernial sac returned into the abdominal cavity; there have been splendid results obtained from the operation.

After Dr. Boyd's case was discussed the Society took up the subject of management of hernia in children for permanent relief.

Dr. Barkley read a paper on the treatment of typhoid fever. The discussion following this paper was free, full and instructive, bearing out personal experiences of the members of the Society.

The evening was spent pleasantly and socially, the Society having the pleasure of accepting Dr. Boyd's invitation to supper.

This feature of the meetings is greatly enjoyed by the members.

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Book Reviews.

The Neurological Practice of Medicine.

By Charles H. Hughes, M.D., President of the Faculty and Professor of Neurology, Psychiatry and Electro-therapy, Barnes Medical College, St. Louis, etc., etc. Hughes & Co. St. Louis. 1903.

This is a "Cursory course of selected lectures in neurology, neuriatry, psychology and psychiatry, applicable to general and special practice, after the author's class room methods as a teacher of students."

Crowded into its 417 pages is a world of knowledge upon diseases of the nervous system, the results of thirty years of extensive clinical experience. The essential definitions, with a description of the neuroses; instruments of precision in diagnosis and practice; electricity and electrical appliances; the anatomy of the spinal cord with reference to its morbid states; the cranial nerves in their clinical relations; lumbar puncture, the psychiatric factor in surgical and medical practice; these and many other subjects are forcefully and most entertainingly considered.

To Dr. Hughes' students this book will be of great value and interest, but the general profession can well profit from its reading.

Modern Surgery. General and Operative.

By John Chalmers DaCosta, M.D., Professor of the Principles of Surgery and of Clinical Surgery in the Jefferson Medical College, Philadelphia. Handsome octavo volume of 1,099 pages, with over 700 illustrations, some in colors. Philadelphia, New York, London. W. B. Saunders & Co. 1903. Cloth, $5.00 net; Sheep or Half Morocco, $6.00 net.

It is fitting that a book upon "Modern Surgery" should deal much in detail with the bacteriology of the subject, which Dr. DaCosta has done, disposing of it in a masterly manner in 41 pages.

Asepsis and Antisepsis follow, with a section on Inflammation. His definition of inflammation is, "when the tissues are injured they react or respond, and this reaction or response is known as inflammation"—and later gives twenty-eight forms of inflammation. The illustrations through this section are very helpful.

The chapter upon Fractures is quite complete. Gibney's method of treating sprains is recommended.

The chapter upon Diseases and Injuries of the Abdomen is full and complete. Appendicitis is judiciously disposed of, biliary surgery also.

In preparing this edition, the author has completely rewritten and revised it, and it has been issued with a larger type page. It is a practical book, and will be found useful and instructive.

The Physician's Pocket Account Book.

By J. J. Taylor, M.D., Philadelphia. Published by the Medical Council, Philadelphia.

This book is a combined ledger and day-book or visiting list. It can be begun any day of the year and continued until used up. Each page represents the individual account of a patient or family; 144 pages of this kind, with 16 pages of the same form so divided as to make five accounts to the page for short or transient accounts.

A Text-book on the Practice of Medicine. Designed for the Use of Students.

By James Magoffin French, M.D., Lecturer on the Theory and Practice of Medicine, Medical College of Ohio; Attending Physician, St. Mary's Hospital, etc., Cincinnati, O. Illustrated by ten full-page plates and fifty wood engravings. New York. Wm. Wood & Co. 1903.

It is a source of gratification that so pleasing a book hails from the little town of Cincinnati, at least we feel that it will be the tendency of a few in the far East to so class Cincinnati.

Part I. deals with the Principles of Medicine, including the Nosology and Etiology of Disease, its Pathology and Bacteria. Part II., Practical Medicine, discusses in Section I., the Infectious Diseases; Section II., Diseases Due to Animal Parasites; Section III., Diseases of the Blood and Ductless Glands; Section IV., of the Circulatory System and Mediastinum; Section V., of the Respiratory System; Section VI., of the Digestive System; Section VII., of the Kidneys; Section VIII., Constitutional Diseases; Sec-

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tion IX., Intoxications; Section X., of the Nervous System.

Part III. deals with the Clinical Methods of Examination, including the technic of the examination of the Blood, Stomach Contents, Intestinal Discharges and Urine. The latter is very thorough and splendidly epitomized.

General Pathology or the Science of the Causes, Nature and Course of the Processes of Disease.

By Dr. Ernst Ziegler, Professor of Pathological Anatomy and of General Pathology in the University of Frieburg in Breisgau. Translated from the Tenth Revised German Edition and edited by Aldred Scott Warthin, Professor of Pathology and Director of the Pathological Laboratory in the University of Michigan, Ann Arbor, Mich. Profusely illustrated. New York: William Wood & Co. 1903.

The Germans, more than any other nationality, deserve the credit of popularizing the study of Pathology. Endowed by nature with love for detail and a capacity to execute the minutiæ of the microscopic work, it is not to be wondered at that they have produced books which have never been equaled.

Ziegler's name has been associated with pathology and pathological anatomy for so long that it is synonymous with all that is excellent in that line.

Throughout the book, at the conclusion of a chapter or subject, there follows a complete list of the literature of that subject, which will enable one to quickly refer to it for additional information.

Chapter XII. deals with the Animal Parasites and the Diseases Produced by Them. The life history of the individual parasite is considered, and numerous illustrations are found here.

The book cannot but continue its popularity.

Diseases of the Nose and Throat.

By Charles Huntoon Knight, A.M., M.D., Professor of Laryngology, Cornell University Medical College, New York. 147 illustrations. Philadelphia: P. Blakiston's Son & Co. 1903. $3.00 net.

This book is made up of lectures delivered at Cornell University Medical College. It includes only the essentials of anatomy, but deals with some positiveness with the unsettled conditions which prevail in therapeutics of this region.

The chapter on Deviations of the Nasal Septum is quite full, the details of the various operations being quite satisfactory. Diphtheria is dismissed with 2½ pages, and nothing is said in regard to its treatment, which in a book of this character we think an oversight.

The chapter on Adenoids is satisfactory, and the proper emphasis has been given to adenectomy as a necessary operation when adenoids are demonstrable. This is also true in what has been said of hypertrophied tonsils.

A Text-Book of Diseases of Women.

By Barton Cooke Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania; Gynecologist to the Howard, the Orthopedic, and the Philadelphia Hospitals. Handsome octavo volume of 675 pages, sumptuously illustrated with some 650 mostly original illustrations, many in colors. Philadelphia, New York, London. W. B. Saunders & Co. 1903. Cloth, $5.00 net; Sheep or Half Morocco, $6.00 net.

This volume is a companion to the author's "Text-Book of Obstetrics," which has created so favorable an impression, the two volumes covering the whole subject of gynecology. The author insists that obstetrics and gynecology are closely and inseparably united. The opening chapter upon The Gynecological Examination is full, and yet concise, being well illustrated by photographs. One could criticise the examiner in these pictures for doing this work without removal of coat and cuffs. The use of case record cards with outline stamp for recording clinical findings is rightly insisted upon.

Injuries and Diseases of the Cervix, including cancer and operative technic in repair of the cervix, are well described. Repair of the perineum is also lucidly written and well illustrated. Indeed, these chapters, from their method of treatment in the companion volume, we have been led to expect much of, and have not been disappointed.

The book is thoroughly modern in pathology and technic, and as a sample of the book-maker's art it has not been excelled.

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A Manual of the Practice of Medicine.

By A. A. Stevens, A.M., M.D., Professor of Pathology in the Woman's Medical College of Pennsylvania; Lecturer on Physical Diagnosis in the University of Pennsylvania; Physician to the Episcopal Hospital and to St. Agnes' Hospital; Fellow of the College of Physicians of Philadelphia, etc. Sixth edition, thoroughly revised, enlarged and reset. Handsome post-octavo of 556 pages, illustrated. Philadelphia, New York, London: W. B. Saunders & Co. 1903. Flexible leather, $2.25 net.

Stevens' Manual has been a popular work since its first edition, this, the sixth, being entirely reset and enlarged. It is a most useful guide and assistant to students in their studies. It is bound, as in former editions, in flexible leather, which adds to its life and usefulness.

A Text-Book of Obstetrics.

By J. Clarence Webster, M.D. (Edin.), F.R.C.P.E., F.R.S.E., Professor of Obstetrics and Gynecology, Rush Medical College, in affiliation with the University of Chicago; Obstetrician and Gynecologist to the Presbyterian Hospital, Chicago; Obstetrician to the Chicago Lying-in-Hospital and Dispensary, Chicago, etc., etc. Handsome octavo volume of 767 pages, with 383 illustrations, 23 in colors. Philadelphia, New York, London. W. B. Saunders & Co. 1903. Cloth, $5.00 net; Sheep or Half Morocco, $6.00 net.

The general arrangement of this book is as follows: Pregnancy, Labor, Puerperium, Pathology of Pregnancy, Pathology of Labor, Pathology of Puerperium, Operative Obstetrics.

In the chapter on Embryology the terms epi-blast, meso-blast and hypo-blast are used. There should be a unanimity in the use of these or the terms in more general use, ecto-, meso- and ento-derm. This chapter is valuable because of the many illustrations, photo-micrographs, etc.

An original cut showing the fetal circulation is used. This is ordinarily a difficult problem for the student to grasp, and without a good illustration it would not be possible. We have seen others which are plainer than this. The study of the pelvis is not taken up until after labor is considered.

The book is thoroughly practical, hence it will be found most helpful to the practitioner. It is well arranged, and not too full for the student. It can be thoroughly commended.

The American Illustrated Medical Dictionary. For Practitioners and Students.

By W. A. Newman Dorland, A.M., M.D., Editor of the "American Pocket Medical Dictionary." Handsome large octavo, nearly 800 pages, bound in full flexible leather. Philadelphia, New York, London: W. B. Saunders & Co. 1903. Price, $4.50 net; with thumb index, $5.00 net.

This is a complete dictionary of the terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, and the kindred branches, including much collateral information of an encyclopedic character, together with new and elaborate tables of Arteries, Muscles, Nerves, Veins, etc.; of Bacilli, Bacteria, Micrococci, Streptococci; Eponymic Tables of Diseases, Operations, Signs and Symptoms, Stains, Tests, Methods of Treatment, etc.

It is the third edition, and in it has been included several hundred new terms. To keep pace with the times such a book must needs have frequent revision. For convenience and usefulness this little book is all that could be desired.

A Text-Book Upon the Pathogenic Bacteria. For Students of Medicine and Physicians.

By Joseph McFarland, M.D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia; Pathologist to the Philadelphia Hospital and to the Medico-Chirurgical Hospital, Philadelphia. Handsome octavo volume of 629 pages, fully illustrated, a number in colors. Philadelphia, New York; London. W. B. Saunders & Co. 1903. Cloth, $3.50 net.

This is the fourth revised edition of this work, and, as the author says, it shows the result of being re-written, the improvement in the force and accuracy of diction, the elimination of old matter and insertion of new.

Infection and Immunity are much improved by the addition of new matter.

A large number of references have been added, which enhance the value of the book to the practitioner. This contains a reference to more than 600 authors.

The technic of bacteriologic study is considered in Part I., and Part II. specific diseases and their bacteria, under which are included the (a) Phlo-

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gistic Diseases, acute and chronic types; (b) the Toxemias; (c) the Bacteremias and Miscellaneous Diseases, as Whooping Cough, Scarlatina, Malignant Edema, etc.

A number of new illustrations have been added. It is an invaluable book.

The Four Epochs of Woman's Life. Maidenhood, Marriage, Maternity, Menopause.

By Anna M. Galbraith, M.D., Author of "Hygiene and Physical Culture for Women;" Fellow of the New York Academy of Medicine, etc. With an Introductory Note by John H. Musser, M.D., Professor of Clinical Medicine, University of Pennsylvania. 12mo volume of 247 pages. Philadelphia, New York, London: W. B. Saunders & Co. 1903. Cloth, $1.50 net.

This book is capable of accomplishing great good if properly placed among the laity. It describes subjects which every woman should know in an entirely scientific manner, yet modest throughout.

A section on the "Hygiene of Puberty" and "Hygiene of the Menopause" have been added to this edition.

Clinical Examination of the Urine and Urinary Diagnosis. A Clinical Guide for the Use of Practitioners and Students of Medicine and Surgery.

By J. Bergen Ogden, M.D., formerly Instructor in Chemistry, Harvard University Medical School Boston, Assistant in Clinical Pathology, Boston City Hospital, etc. Second revised edition. Handsome octavo volume of 418 pages, illustrated, including 11 plates, 9 of them in colors. Philadelphia, New York, London: W. B. Saunders & Co. 1903. Cloth, $3.00 net.

The aim of this work is to present in as concise a manner as possible the chemistry of the urine in its relation to physiologic processes; the most approved working methods, both qualitative and quantitative; the diagnosis of diseases and disturbances of the kidneys and urinary processes. It is a work eminently in demand, since most of the books on the urine are devoted exclusively to urinary chemistry, a knowledge of urinary diagnosis being obtainable only by an extended search through works on medicine, surgery, pathology, and chemistry.

In this, the second edition, special effort has evidently been directed toward making the text complete and bringing it absolutely down to the present day advances in the subject. Important changes have been made in Part I., especially in connection with the determination of Urea, Uric Acid, and Total Nitrogen; and the subjects of Cryoscopy and Beta-Oxybutyric Acid have been given a place. The changes in Part II., while not so extensive, are nevertheless numerous and practical, and show that the author has spared neither pains nor time in making the revision thorough. It is a good book, and both student and practitioner will find it a valuable aid in their clinical work.

The Practical Medicine Series of Year-Books.

Vol. IX., August, 1903. Chicago. The Year-Book Publishers.

The subjects considered in this volume are Pathology and Anatomy, by Dr. W. T. Evans; Physiology, Bacteriology and Hygiene, by Dr. Adolph Gehamann, and a Dictionary of New Words, by Dr. William Healy.

The series is under the general editorial management of Dr. Gustavus P. Head.

Vol. X. September, 1903.

This volume is devoted to Skin and Venereal Diseases, edited by Dr. W. L. Baum, and Nervous and Mental Diseases, edited by Dr. Hugh T. Patrick, both of Chicago.

A Manual of Hygiene and Sanitation.

By Seneca Egbert, A.M., M.D., Professor of Hygiene and Dean of the Medico-Chirurgical College of Philadelphia, etc. Third Edition, Enlarged and Revised; with 86 engravings. Lea Bros. & Co. Philadelphia. 1903.

It is well known that in many medical schools of prominence hygiene and sanitation were not taught until recent years. If these chairs were advertised it was merely nominal, they being tacked on to other branches. In the modern school this is different, and the demand for text-books upon this branch soon followed. Of the many that have been before the pro-

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fession for a number of years, this one by Dr. Egbert is one of the most useful. It is concise, methodical, succinct, and not too technical, and will be found of use by the layman and those connected with boards of health, etc. It is a book such as its title indicates, dealing with the prevention of disease primarily.

A Text-book of Clinical Anatomy. For Students and Practitioners.

By Daniel N. Eisendrath, A.B., M.D., Clinical Professor of Anatomy in the Medical Department of the University of Illinois (College of Physicians and Surgeons); Attending Surgeon to the Cook County Hospital, Chicago, etc. Handsome octavo of 515 pages, beautifully illustrated with 153 illustrations, a number in colors. Philadelphia, New York, London: W. B. Saunders & Co. 1903. Cloth, $5.00 net; Sheep or Half Morocco, $6.00 net.

The term clinical anatomy is used to convey the fact that it is anatomical knowledge applied to every branch of clinical work; i. e., not only medicine and surgery in the narrower sense, but all the specialties. Anatomy as it has formerly been taught is of little value to the practitioner; he should learn, as the author urges, to palpate and outline structures, and study the relation of vessels and nerves. This book can be considered a bridge or step from descriptive anatomy to its application at the bedside.

Too much cannot be said commendatory of the excellence in appearance of the book from a typographical standpoint. The illustrations are superb and the general appearance of the book splendid.

A Dictionary of Medical Science.

By Richard Dungleson, M.D., LL.D., Late Professor of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College, Philadelphia. Twenty-third Edition, Revised by Thomas L. Stedman, A.M., M.D., Fellow of the New York Academy of Medicine. 1903. Lea Bros. & Co., Philadelphia, Pa.

This standard work has gone through twenty-three editions, in order to keep it abreast of the times. It contains a full explanation of the various subjects and terms of Anatomy, Physiology, Medical Chemistry, Pharmacy, Pharmacology, Therapeutics, Medicine, Hygiene, Dietetics, Pathology, Bacteriology, Surgery, Ophthalmology, Otology, Laryngology, Dermatology, Gynecology, Obstetrics, Pediatrics, Medical Jurisprudence, Dentistry, Veterinary Science, etc.

The style adopted by a dictionary either makes or mars it. In Dungleson there has always been a style peculiarly its own. The word in black-faced type, properly accentuated for guide in pronunciation, its derivation, from either Latin or Greek, synonym and definition. By a system of cross references the book is much more useful, and no words or terms are lost.

Ewing on the Clinical Pathology of the Blood. New (2d) edition. A Treatise on the General Principles and Applications of Hematology.

By James Ewing, M.D., Professor of Pathology, Cornell University Medical College, New York. New (2d) edition, revised and enlarged. In one octavo volume of 492 pages, with 43 engravings and 18 full-page colored plates. Cloth, $3.50 net. Lea Brothers & Co., Publishers, Philadelphia and New York. 1903.

The rapid exhaustion of the first issue of this work and the many advances in this department have necessitated its re-issue. The results of all the recent studies have been incorporated, which has necessitated references to about four hundred new articles or monographs.

The chapter on Technics, the most important to the beginning laboratory worker, has been added to materially in this edition.

As in the first edition, fine print has been used for abstracts of articles, reports of cases, etc., thus not being in the way in the main text.

Hematology, a closed book until recently, has been carefully studied of late, there being many painstaking workers in this field.

Dr. Ewing has covered the ground admirably, the book serving well as either a text-book or reference book for laboratory workers.

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Original Communications.

RECTAL SURGERY IN THE GENERAL PRACTICE OF MEDICINE.*

BY D. O. HANCOCK, M.D.,

Member of County, State, and American Medical Associations.

HENDERSON, KY.

With us, of Henderson city and county, it is a duty to do each for himself more or less surgery. We are fortunate in having among us men of special skill, and men who have, in certain lines of general surgery, developed ability to do some things better than others. The same is true in certain lines of general practice. Perhaps no one among us has so thoroughly mastered all branches as to stand, like Saul, head and shoulders above the rest.

The object of our effort is to give the best service to suffering humanity. A thorough understanding of the strong points in the individual make-up of our ranks, and a liberal use of these superior qualities by frequent consultations, and honest dealing with each other and our patrons, can, alone, secure this chief object.

True as this may be, we go back to our first statement—we must each for himself do more or less surgery. Each must incise abscesses, dress wounds, treat fractures, reduce dislocations, etc. We do these things because we can do them, and do them well; and because we should do them. The plea of this paper is that rectal surgery should be placed in this class of surgery and be done by the general practitioner with the same degree of skill and confidence as he does any of the commoner operations of his craft.

I quote a familiar author, "It is a well-known fact that diseases of the rectum have not received that careful attention by the medical profession which its importance demands. From time immemorial these ailments have been in the hands of the charlatan." Much as has been done and written on this subject, this language is as true today as when it was written by our own Dr. Mathews, a decade ago.

These truths bear causal relation to the existence in every community of a number of unfortunates, who have easily curable affections of the rectum. There is hardly a man or a woman but knows of cases, and can give you names and residences of persons so afflicted. The charlatan has shown himself so unskillful and so unscrupulous, both in treatment and in fees, that our friends dare not trust him, choosing "rather to bear the ills they have, than to fly to others they know not of." We all remember a familiar figure going about our streets not long since, who, after confinement in bed for several weeks, carried an air-cushion about with him for quite a while. All was the result of improper treatment at the hands of a man who "Cured without the knife."

The family physician who can not, or will not, properly treat these cases, but who prescribes (frequently without making an examination) ointments, salves, astringent lotions, etc., deters

*Read before the Henderson County (Ky.) Medical Society, October 12, 1903.

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these patients. Many have, and rightly so, too, the utmost confidence in their "family doctor." What he does is all that can or need be done. Therefore, they go on suffering.

Again, the rectal specialist, trained in New York and in London, must have for his services fifty or one hundred dollars, if it be a poor man, and upward *ad infinitum* if the patient be rich. The patient must also pay traveling expenses, and sanitarium bills, making a cure at the hands of the specialist too expensive for most people. Besides, the family doctor has a confidence, which long years has established. This the specialist cannot have. At the earnest solicitation of the home doctor, and after torture unbearable, the patient may go to the specialist, but, then with fear and trembling.

The practitioner should do this work because—First, he has the confidence of his patient, and can persuade him to submit to operation. Second, he can do this work at a place convenient to the patient, and at a cost which the man can pay. Third, he *can* do this work, and do it well.

With ability, economy and confidence at our command, the long sufferers from piles, fistula, fissure, stricture and constipation should disappear from among us, and no longer advertise our incapacity and indolence. No refinement of specialism will ever relieve us of our duty to these patients.

I will stand corrected if the sense of this presence is that more than 50 per cent. of these cases of surgical rectal diseases, occurring in our territory, are treated successfully by us. I verily believe that a large per cent. of the physicians of Henderson county have never done a surgical operation upon the rectum. By this I mean not that they have not split a blue, external tit, evacuating a clot, or clipped off a tag of inflamed, redundant skin, or, under cocaine, tied off an external pile, which, being inflamed, seemed to the patient as large as a walnut, or incised an abscess, or cauterized a fissure; but I mean that under general anesthesia, to divulse the sphincter, and by one of the recognized, and only, ways of curing these cases, do a surgical operation upon the rectum. Again I stand corrected, if I have stated this too strongly. Of this estimated 50 per cent. of cases, that have not submitted to surgery at our hands, some have gone to the specialist. For them we have not a word of complaint. Some have gone to the charlatan and shark. They have our sympathy. The remainder go about among us, in agony of body and mind, incapacitated for business or social life. Many doctors of our county do this work successfully. I have estimated that 50* per cent. of these cases are cured by them. But I repeat: These affections should be placed in the same category with fractures, dislocations, contused, incised and gun-shot wounds, and treated by every practitioner with the same confidence, skill and success. I am not unmindful of the advantage of having a "sure-enough" surgeon in all of these cases—one who gives his whole time and thought to surgery. But such person is not available or practicable in the country, or in towns, or in small cities. In large cities they are often out of the way, or engaged, and the family doctor must do surgery.

Reflexes have, in recent years, occupied a large place in medical literature. Those of the rectum are many. Often we are first consulted for some reflex, and by our familiarity with the subject we are able to locate the trouble, and by surgery relieve it. We pass, also, the etiology of these diseases. It must, however, be understood, if we would render our patients the best service.

I shall not affect an original method of dealing with any of these conditions. I would not advise that the general practitioner undertake such surgical finesse as sub-mucous ligation of hemorrhoids, or denuding a pile of its mucous membrane, dissecting out the hem-

*Too great, Dr. Dixon thinks 10 per cent. large enough.—Discussion.

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orrhoid, and after controlling the bleeding, by tortion if necessary, replace the mucous membrane, and get union by first intention. Nor should he attempt to dissect out a fistula, and, securing apposition with sutures, get the wound healed over in a week. There are methods of operating which are classical. They are recognized as safe and sure of cure. Let us stay hard within these lines. One of these, mastered and practiced, will give satisfactory results.

HEMORRHOIDS.

In treating this part of our subject, we assume that every physician can make a diagnosis. It matters little if external piles or internal piles, itching piles or blind piles, raspberry piles or *gooseberry* piles. When the sphincter is divulsed, and the pile area everted, you have all of them external piles, and you treat them as big piles and little piles. The clinical importance of which is that the large piles must be transfixed, if treated with ligature.

Owing to the absence of valves in the hemorrhoidal veins, and to the erect position of the body, and to the peculiar office of the rectum, these veins are very liable to become dilated and varicose. They may contain a blood clot, yet neither, nor all of these conditions constitute piles. The treatment, as laid down for hemorrhoids, whether palliative or operative, could not be properly applied at this time to this condition. Here, doubtless, is where the treatment of piles by the dorsal decubitus, with hips elevated, as advocated occasionally, comes in. Here, also, is possibly where cures "without the knife" are most frequently accomplished. This preceding condition tends to, and may culminate in, piles. There must, however, be a further pathological change to constitute the hemorrhoidal affection. The congestion induced and the friction necessitated cause an inflammatory exudate to take place in the tissues, and a veritable tumor is the result. This tumor is well defined. It can be seen and handled, is firm to the touch, and grows by plastic infiltration. Remove it and you cure the condition. This, possibly, may be done by absorption, but such is very rare, if at all. We must cut them away, burn them away, or slough them away.

The injection method of treatment contemplates either absorption or sloughing. The one by limiting the blood supply and stimulating absorption; the other by cutting off the blood supply by caustic injections, causing sloughing of the parts. The first is inconsistent, the second irrational. Both are dangerous. Frequently gratifying results are obtained by each.

The cautery method is thought by its adherents to be the ideal operation. The gut is cleared at once. There are fewer reflexes, less after pain, and quicker recovery. There is, however, greater danger of secondary hemorrhage, and more liability to recurrence, because the dilated, varicose condition of the veins, that frequently exists as pre-hemorrhoidal tissue cannot be so well removed without incurring risk of a strictured condition of the bowel by excess of cicatricial tissue. It is a standard, classical method. Those who practice it do safe and satisfactory surgery.

The ligature method combines removal by cutting and sloughing. I operate by this method, and prefer it, because during my time in medical college and my year as interne I saw no other performed. Results from these were uniformly satisfactory. Because, also, I am familiar with its technique, and have never been disappointed by its use. I believe it the safest, as to life, the surest of permanent cure, and freest from accidents.

Our text-books describe these operations better than can be done in this paper.

Abscesses about the rectum demand more attention than elsewhere. They should be freely incised and constantly looked after. If large, it may be

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necessary to give a general anesthetic before incising them, which should in every case be done early. If possible, prevent fistula.

FISTULA.

This affection, I believe, is of less frequent occurrence than hemorrhoids, but of more serious import. Fistula kills. No temporizing should be indulged. Delay only makes more difficult a cure. A simple sinus, with no cicatricial tissue or tube (if such ever occurs,) may be cured by cleansing, and the use of the fistula-tome, or by injecting irritants and antiseptics, or by the elastic ligature—all of which are unscientific and unsurgical, and of doubtful efficacy. It is impossible to know that there is but one track. The incision will enable us to know by searching with the probe if there are multiple tracks, and if there are not, it is still the most surgical way of treatment. I therefore believe that for fistula there is but one treatment. Follow up the track, or tracks, to their last ramification, with a grooved director, and cut straight out. Dissect out the bottom of the tract, and treat an open wound. The general practitioner should not only not attempt apposition and union, but he should vigilently prevent such occurring. There is great disposition of the parts to bridge over and close out the job. I have often pulled the adhered surfaces apart, and sponged firmly in the bottom of a rapidly healing wound of this kind. Insist that the wound heal from the bottom, by healthy granulations. Then, if you have been successful in finding and dividing all the sinuses, you will have a permanent cure. If a single sinus has been overlooked and left, most certainly there will be a recurrence of the trouble. Improper after-treatment may, also, cause a recurrence. It is sometimes impossible to go to the end of every sinus. This should be recognized at the time, and explained to the immediate friends. Thereby we shall avoid criticism when recurrence shows itself. It is wise, also, to explain the extreme difficulty there is in finding every track, and the probability of overlooking one or more of them; so that, if the cure is not effected, you will retain the respect of your patron. I have known a good man to make this mistake, and be the subject of comment for years thereafter. I may not suggest more for this operation than is found in descriptions of it in our text-books. I shall not classify, as we find it in our books. Clinically, it matters not if the fistula is a blind one, or has two eyes; or one outside or one inside, or a horse-shoe or a mule-shoe. If an abnormal hole is found, follow it to the bitter end, having respect, of course, to certain muscles, blood vessels and organs. If this cannot be done, a paliative operation may be performed, and the explanation suggested made to the friends.

Fissure, sometimes called irritable ulcer, is perhaps the most painful of all these affections. This may be treated medically, but far better surgically. A number of operations have been proposed. A satisfactory manner of dealing with this trouble is to anesthetize the patient, divulse the sphincter and scarify the ulcer. If there is much induration, it is well to dissect out the fissure and ulcer, and either suture the mucous membrane, or, better, leave it to care for itself.

Ulcers, large and small, are frequently found in the rectum proper. Divulse the sphincter, and curet. Then treat with injections—antiseptic, astringent, emolient.

Stricture is the most obstinate of the curable diseases of the rectum. Give chloroform, divide dorsally, divulse, put in a tube wrapped with gauze, which remove after three days, and treat with antiseptic injections and oils. Reformation must be prevented. The cause, if ascertained, must be given consideration.

The surgical treatment of *constipation*, by removing valves of the rectum, is recommended by so eminent an au-

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thority as Dr. Gant, of New York. It is well to leave these valves, their existence, their function and their treatment, yet a while with the college men.

When every doctor has learned to treat, surgically, these conditions, and to diagnose and treat the medical diseases of the rectum and sigmoid flexure successfully, there will be less suffering in the world, more money in the doctor's purse, and more grateful hearts to bless him and his labors. I have purposely not assayed cancer of the rectum and sigmoid flexure, or tuberculosis of these parts. I shall not enter the discussion of the extirpation of the rectum, or of the propriety of colotomy. These graver conditions, and more serious operations, I regard as outside of the duty and reasonable skill of the general practitioner.

The treatment of these affections at the doctor's office is advocated by good men. The milder forms, and even the large pile areas, are being cleared in segments, by using local anesthesia. Some of us, however, prefer to limit the use of cocaine in our office work. The power of suggestion works better on other parts of the body than on the rectum. Patients do not court pain at our hands. Office treatment may be successfully done by the specialist and men of great reputation, but for the general practitioner I think it wisest to give chloroform or ether before any attempt is made at surgery, and then do a complete operation.

The subject of *anesthesia* is of such importance as to demand especial and separate consideration. A most excellent paper on this subject was the oration of Dr. Lewis before the Kentucky State Medical Society at its 1903 meeting. Remembering the reflexes, it is highly important that the patient be fully under the anesthetic before divulsing the sphincter. Should respiration become embarrassed, a positive stimulus will be given by divulsion.

The preparation of the patient for operation should cover a period of three days, during which time the diet should be restricted. On the first day, at night, give a full dose of calomel; on the second day give saline in the morning and full doses of quinine in the afternoon; on the third day give quinine in the forenoon; on the fourth day give enema in the morning, early, and also one hour before operating, say at 10 o'clock a.m.; have patient remain in bed on the morning of the operation.

The after treatment should be rest in bed, and morphia to control pain and prevent the bowels moving for three days, when an enema is given, and such subsequent treatment as the case demands.

We have not gone far into any division of the subject. If these suggestions shall assist in the selection and use of a safe way of treating these diseases I shall be amply repaid. The burden of this writing is an effort to get at some means of reaching neglected sufferers. I have endeavored to place the responsibility upon the general practitioner and urge him to do his work.

DIPHTHERIA.*

BY J. D. KISER, M.D.,
LEXINGTON, KY.

I shall endeavor to give a brief report of cases of diphtheria, without entering into an elaborate discussion of the pathological forms. I will consider what the general practitioner usually meets in routine practice.

One of the most important, if not the *most* important, inflammations to which the throat is liable is diphtheria.

Diphtheria is an infectious disease, and in past years it was considered the most fatal malady to childhood.

It is not known when the disease originated; it has been traced back as far as Asclepiades, who lived 100 years B. C., and who performed tonsillotomy and laryngotomy for the relief of respiration, and it is believed he treated diphtheria. Aretaeus, a Greek physi-

* Read at the Kentucky Valley Medical Association, at Stanton, Ky., October 15, 16, 1903.

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cian of Cappadocia, at the commencement of the Christian era, gives in writings a description of mild and severe types of diphtheria. He describes ulcers upon the tonsils covered with a white, livid or black concrete product; he says that if the malady invades the chest by the trachea, it causes suffocation on the same day. From his concise description of the malady it must have been diphtheria.

The disease occurs more often from the second to the fifth year, but no period of life is absolutely immune, unless it be in the new born. The disease is more common in cities; in tenement-house population, where there is bad and unsanitary sewerage and drainage, the germ finds a good propagating place.

The writers of the past and present have dwelt upon the high potency of its contagion, but the establishment of the germ theory was left to Klebs in 1875, who isolated the bacillus of the disease, but his views were not generally accepted till 1883, but in 1884 they were confirmed by Loeffler; in 1888 Roux and Yersen succeeded in inducing in animals the paralysis and other toxic manifestations which had been matters of clinical observation. From this period nearly all the practitioners have accepted the theory of Klebs-Loeffler bacillus causing the disease. The virus enters the system through the mucous membrane, more often in the pharynx, and is considered a local disease; here it sets up a local inflammation, from which the entire system may become poisoned, thus converting a local into a constitutional disease.

The co-existence of heat, moisture, and particles of decomposed food, afford opportunities for the development of the bacillus. Grayish patches, round in shape, form on a red, swollen base upon the tonsils, faucial pillars, uvula, palate or pharynx. The membrane soon becomes thickened and changes to a yellowish tinge and to a brownish black in case of hemorrhage. It forms first in the superficial layers of the mucosa, gradually extending to the deeper portions. It may extend to the naso-pharynx and nose; may infect the eye, causing a violent conjunctivitis and swollen lids. A membrane may form on the conjunctivia; the middle ear may become involved by the extension of the inflammation up the eustachian tube; even the finer ramification of the bronchial tubes may become infected.

The deposit varies from a thin film to a dense thick membrane. Detachment begins at the edges which curl up and the deposit peels off, sometimes followed by bleeding. The absorption of the toxic material goes on, and swelling of the glands of the neck may follow. Temperature hardly ever over 103° F., but a very rapid pulse may be looked for, and often irregular. The pulse is the best index to tell to what extent the system is poisoned; an irregular, slow pulse is a very unfavorable symptom. The kidneys are very often involved, the symptoms appearing about the third day; urine may be slightly diminished or increased, but if actual nephritis occurs urine is scanty, hyaline and granular casts are present, and red corpuscles appear in urine.

The foregoing symptoms are the ordinary features of pharyngeal diphtheria.

Diagnosis—It is true diphtheria was diagnosed before the Klebs-Loeffler bacillus was known, and it is not a good idea to put too much stress upon the bacteriological examination. The physician has to act quickly and cannot wait on the bacteriologist. The mere presence of a membrane in the throat should put the practitioner on his guard, and if the child is under 10 years old it is more than likely to be diphtheria. A sore throat that has begun with a high temperature is less liable to be diphtheria than one where the temperature has gradually risen.

The prognosis varies greatly, high in some epidemics, quite low in others; both sexes are equally affected, but Ja-

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cobi says mortality is greater in boys than girls. The laryngeal cases are more fatal than pharyngeal. Before the days of antitoxin the mortality varied from 30 to 50 per cent., but now from 10 to 18, so there must be something in the efficacy of antitoxin.

I shall report fifty cases, fifteen being of a severe type, eighteen not so severe, seventeen were mild.

I lost two of the fifteen and one of the eighteen; all of the seventeen, or mild cases, recovered.

CASE I. A boy 5 years old was seen September 10, 1900. There was an extensive membrane on both tonsils and pharynx; patient could not swallow liquid; dyspnea was present. I used fifteen hundred units of antitoxin; patient died about four hours after injection.

CASE II. A girl 6 years old. I saw her September 13. Patient pallid, very nervous and restless; breathing hard; reddish, yellow patches on tonsils and throat. Heart irregular. I injected 2000 units of antitoxin. Was sent for ten hours later; patient was broken out with a rash; heart not so irregular, but patient soon began to grow worse, and died fourteen hours after the injection.

The remaining thirteen of my fifteen cases recovered, by the antitoxin treatment, and they seemed to be just as bad as the two I lost, so my mortality was 13 per cent.

CASE III. Boy, age 4. Was seen October 1. I did not think this case was severe. There was a small patch of brownish membrane on tonsil; child breathed easily, but pulse was somewhat irregular. I injected 1000 units of antitoxin. Patient improved for three days, but the fourth day the tide turned, and this case died. So I lost one case I was almost confident would recover.

I lost 5 per cent. of my eighteen cases. The remaining seventeen, average cases in severity, all recovered by the antitoxin treatment, and several of them were much worse, according to general symptoms, than the one I lost. I used all the way from 500 to 3000 units, and repeated half of 3000 units on five cases the next day.

The seventeen mild cases all recovered by the use of antitoxin. I lost three cases of the fifty I treated, making a mortality of 6 per cent., which I believe, without the antitoxin, I would have lost from 15 to 20 per cent.

I believe antitoxin is as near a specific in diphtheria as vaccine virus is for the prevention of variola.

In addition to antitoxin, tr. of ferri and glycerinum, equal parts, was administered to all cases, in dose from 5 to 25 minims every two to four hours.

PRACTICAL POINT IN DIETETICS.*

BY SIDNEY J. MEYERS, M.D.,

Professor of Pathology and Hygiene, Kentucky University, Medical Department.

LOUISVILLE, KY.

As the science of medicine progresses, as pathology is better understood, less importance is given to drugs, and more to the collateral methods of treating disease, so that to-day we accord a most prominent place to dietetic therapy. Whenever a radical advancement of this kind is made, and when experience teaches us that we have another agent to depend upon, we sometimes stop, take things for granted, then go heedlessly along and allow many fallacies to creep in.

Physiologists have proven again and again that to maintain the human body in a healthy state it must be supplied with a sufficient and varied diet.* This diet must consist of all the elements furnished by the proximate principles of food. While hydrocarbons, albumins and carbohydrates form the three principles which enter into our diet, yet some consideration is due the salts and water which are incorporated with them. The amount of each necessary is dependent upon many varying circumstances. The proportions vary somewhat according to occupation, cli-

* Read before the Jefferson County Medical Society, December 15, 1903.

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mate, season, age, idiosyncrasy, etc., yet the per cent. represented by each of these constituents is fairly constant. Each of the proximate principles has a specific duty to perform, and when lowered to the minimum or withdrawn entirely from our diet certain functions and organs must necessarily suffer. The carbohydrates, comprising about three-fifths of our regular diet, furnish that very necessary force, body fuel, and if any excess is taken, and in health this generally occurs, the surplus is stored as fat. The albuminoids or proteids form only about one-fifth, yet they are as essential as the starches and sugars, for they repair waste, to which the human body is a constant prey. The fats appear in the same proportion, and they assist the organism in furnishing new cell elements, and are therefore the normal tissue builders of the body. The salts of the blood are derived from the salts taken in as part of the food stuffs of all classes. Water demands some consideration as a food, for many conditions arise where too little water is consumed, as it is necessary that a liberal amount be taken to procure proper dilution, absorption and excretion.

From the above resume it is at once correctly assumed that our organism cannot survive, in health, for any length of time upon one or more of the food principles to the exclusion of the others.

Whether we are to prescribe a diet for the well or sick, the robust or cachectic, whether for the infant or adult, the weakling or athlete, is of vital importance, yet it is often lost sight of in the treatment, especially of those specific diseases where a correct and scientific diet means so much. It is an essential feature to inquire into the secretions of the whole alimentary canal, its capability of receiving, treating, digesting and absorbing the character of diet prescribed. If these functions should be abnormal, what good can we hope to accomplish, even though we withhold, in certain diseases, contra-indicated foods, for indigestible ones.

Most progress has been made in infant feeding, for to-day we can so regulate, by exact proportion, the liquid diet of an infant, that every indication can be met by simply lowering or raising the per cent. of each or all of the food proximate principles, thereby insuring an exact combination capable of giving definite results proving the digestive secretions are normal and no specific disease intervenes.

With an adult, it is not so easy to formulate a definite proportional diet, principally because of the great variety and consistency of the food stuffs ordinarily necessary for his maintenance.

In health little consideration is paid to what one should eat, and only after the appearance of some stomachic or intestinal disturbance is this important matter given thought. The one great evil of this inattention is overfeeding, and its gravest consequence is, in all probability, an autointoxication. Foods are taken in quantities far in excess of what is needed to supply force, energy and repair of tissue. The organism is unable to appropriate all that is taken, and this necessarily allows an accumulation of organic products of metabolism, which, when only in normal amount, are cared for by absorption and excretion, but when, as in over indulgence in foods, the amount is excessive, these products act as foreign material. They not only hinder normal cellular action, but by their retention are further converted into toxic compounds. This condition so depletes the vital function that the organism is made most susceptible, even to the invasion of infectious diseases.

It is in diseases that our most valuable dietetic knowledge can be shown, and here, also, can our errors be many and harmful. In many diseases an exact and severely strict diet is prescribed, thereby hoping to eliminate from the feeding of the sick such substances which in a given disease cannot be properly cared for.

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These substances belong to one of the great classes, and their withdrawal means a deprivation to the organism.

Should you withdraw the carbohydrates in diabetics or the albumins in lithemic patients, irrespective of their ability to withstand this loss, so far as the tissue elements are concerned, is it absolutely certain that we always do more good than harm? It was this question that tempted me to write this brief paper.

Usually little or no attention is paid to the physical condition of the patient, nor to his ability to digest and assimilate certain classes of food. It is immaterial whether they be robust or emaciated, young or old, for if a certain disease is known to exist, we feel that this exact and correct diet must be advised.

This, if true, is an error, for with the withdrawal of these certain functions must suffer from lack of these absolutely necessary constituents. A muscular, plethoric subject can withstand for a great length of time, it is true, the presence of any one of the proximate principles, but is it so with the anemic and emaciated, or with those having a heart lesion coincident with the disease we hope to improve by dieting?

A patient leading a sedentary luxurious life will not be materially harmed by withdrawal of the carbohydrates, but in the wage earners who are engaged either in laborious physical or mental pursuits, force and energy are essential and must be supplied or our subject suffers. Even nature asserts herself in these cases, and in many cases the absolute abstaining from a certain class does not cause its absence from the body.

Knowing what is demanded this strict diet is overcome and synthetical compound of carbohydrates and albumins are formed in the body at the expense of the tissues. It certainly seems then that it is infinitely more proper to allow a more liberal diet in these cases than to have these uncertain chemical compounds formed by metabolic processes at the expense and to the detriment of the healthy cellular elements of the body.

In obesity where no pathological condition exists, and where one is deprived of the carbohydrates simply to please the fancy, great harm is done, and often after the patient has lost sufficiently in weight we are consulted to stay the loss. We find that certain secretions have become changed and an abnormal enzyme takes the place of the healthy juices.

In those diseases where food is withheld so as to take from the digestive apparatus much work, as is diseases involving the gastro-intestinal tract, we cannot be too careful in the kind of feeding, yet we can make our diet too scanty, so that repair will not take place even in the smallest proportion to waste.

If any of these statements are based upon facts, and I am sure they are, would it not be wiser to consider the physical condition of the patient rather than be absorbed in his disease alone?

INTRA-CAPSULAR (?) FRACTURE OF FEMUR.

BY JOHN B. RICHARDSON, M.D.,

LOUISVILLE, KY.

The subject of this history is a prominent, revered and aged member of our profession, of Louisville, Dr. W. W. Senteny, now nearly 86 years of age.

On the 21st of May, 1903, I was called by telephone in haste to him, who, it was stated, had been seriously injured. The doctor had gone, as was his wont, onto and down the stone steps in front of his residence to get his morning's paper. After securing it, he walked up the steps, and had gotten upon the platform in front of the door, when he had a slight attack of dizziness and fell, striking upon the left trochanter. There was local pain, increased by pressure; loss of power, shortening two inches, with marked eversion.

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My diagnosis of intra-capsular fracture was concurred in by my friend, Dr. Thos. P. Satterwhite, and my son, Dr. John B. Richardson, Jr.

The doctor was placed in bed, upon his back, with the fractured leg extended, sand-bags being employed on. the outer and inner sides of the leg, the outer one extending from the crest of the ilium below the heel, and the inner one from just below the perineum to below the heel.

Two days after being in bed a bed-sore was discovered over sacrum, with which we had to contend for some time. Through the employment of ring-shaped air cushions and stimulating and antiseptic powders, we had the satisfaction, after two months' endeavors, of seeing the bed sore heal perfectly; an unusual happening in a patient of his advanced age.

As in all such cases, we had that varied and trying experience of frequent attacks of indigestion and mal-assimilation of food, with their consequences of diarrhea, and those other difficulties in the evacuation of his bowels and bladder, and yet keep the patient dry and clean. At no time were any manipulations of the leg made to elicit crepitus, for fear of disturbing the impaction of the fractured ends of the bone, and to this fact, we believe at this date, October 8, 1903, either fibrous or osseous union (or both) has occurred, for without any pain he can cross this leg over his right one, and also has quite free movements of extension and flexion, as well as the ability of rotation, outer and inner, of this member.

Unfortunately, the right leg for many years has been weak (he calls it his "weak leg"), still he can walk, with the aid of crutches and his servant steadying him. His general health is perfect, and in sitting in and being rolled about in his invalid's chair, and in reading the newspapers, he enjoys himself and is still a great comfort to his family.

Whilst confined to his bed, we used an air mattress, which proved to be a great comfort to him during the heated term of last summer.

The last apparatus applied with the view of steadying the leg, and to give him greater confidence in himself when attempting to walk, was a well-fitting sole leather splint, but any form of splint has proved very disagreeable to him, and he now wears none, and would not allow any of them to remain on his leg more than a day or two.

Bryant, in his "Practice of Surgery," p. 861, says, "Every case of fracture of the neck of the femur, impacted or non-impacted, intra- or extra-capsular, in the young, middle aged or old, is to be treated as if repair and union are sure to take place, if the parts are kept at rest and in apposition; and in the large proportion of cases the hopes of the surgeon will not be disappointed. In the impacted fractures of every form, union is to be looked for if the broken fragments are left alone, and not loosened by a careless and too curious manipulation. In the purely intra-capsular fracture, union may take place, osseous union resulting in many cases, fibrous union in more, no union in a few; and when the latter result follows treatment, it is too often because the fractured bones are not kept sufficiently closely at rest and in apposition."

The above quotation is a true, and in parts a very optimistic, view of cases of fracture *within the capsular ligament*, and does not accord with my experience in cases of this particular nature, for I have observed that union, either fibrous or osseous, is a rare exception to the rule, most of them remaining ununited for the remainder of the subject's life, power to employ the member being reduced to a minimum, even where the age is much less than that of the subject of this report.

I refer, of course, to those cases of non-impacted fracture and to those cases of impacted fracture which have been officiously manipulated in the anxiety or determination on the part of the surgeon to elicit crepitus to enable him

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to arrive at a certain conclusion as to the existence of fracture.

Bryant's rule is beyond doubt the correct one, for if we have the three symptoms above mentioned, viz., local pain, loss of power—more or less marked eversion—and shortening upon accurate measurement and comparison with the sound limb, we can safely conclude in our diagnosis of fracture. No manipulation of the fractured leg should be made or allowed to be made, but the leg should be immediately placed in the most comfortable position, and there kept by lateral supports through the means of sand-bags until sufficient time has elapsed for union of the fractured bone to have taken place; in the aged I should say at least three months, thus giving ample time for union, either osseous or fibrous, to occur. I have my patient make daily attempts at walking, having him closely watched and aided to prevent his falling, and am of the opinion, judging from his excellent powers of digestion and assimilation thus far evidenced, that he may live for some years with comparative comfort to himself and enjoyment of life.

In my reading and personal experience, and through inquiries of many professional confreres, I know of no other case of similar nature in a subject so far advanced in years whose union has occurred, and for this reason I have reported this case.

Dr. Royal Whitman, of New York City, has written an article, entitled, "A New Method of Treatment for Fracture of the Neck of the Femur," etc. The treatment he recommends is novel, and impresses me as not only of the greatest importance, but mechanically correct. This article, to be appreciated, should be read in its entirety. His plan is *extreme abduction* of the fractured limb, believing thereby to more certainly and perfectly bring the fractured ends of the bone in apposition, and thus retaining them by the employment of "the long plaster spica bandage." I quote the following from page 5 of said article:

"I need not review the familiar methods of treatment of this injury. It is sufficient to say that if the aim is reposition and subsequent retention in normal position, they are faulty in conception and in practice. If, however, the patient were anesthetized, and if, under traction and counter-traction, the thigh were abducted, it would seem that the outer fragment, which would be turned downward and inward, would be far more likely to be brought into apposition with the inner fragment than when the limb is held in the line of the body. If reposition were attained, it could be assured by the long plaster spica bandage, for this would provide the antero-posterior support that is lacking in the ordinary splints, while upward displacement, supposedly caused by muscular action, would be prevented by the direct contact of the outer extremity of the neck and the trochanter with the rim of the acetabulum and side of the pelvis."

Dr. Whitman, in the following quotation, epitomises the results by his novel method of treating these cases:

"In all the cases, nineteen in number, with but one exception, there was union, an average shortening of not more than three-quarters of an inch, and but little disability other than slight restriction of motion, a moderate limp, and a certain discomfort during the stage of repair."

We cannot be too emphatic in all cases of this nature—no matter what the age of the subject may be—in giving an unfavorable prognosis as to amount of shortening, limiting of motion, and deformity.

TO MY OLD SADDLE-BAGS. AN ODE.

BY R. R. WYATT, M.D.,
MACON, MISS.

I lay thee away. Dusty, brown, weather-beaten, sun-warped, so thy vials fit not, rickety, forlorn, but friend to me these fifteen years thou hast been.

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Always faithful, never faltering, wise and silent as an owl. What scenes hast thou witnessed, departed friend? Joy and sadness, perchance the rifest, noisiest grief when sable death did appear with her twin sister despair!

Couldst thou speak, old friend, many a tale might thy leathery lips unfold. Tales of midnight scenes, of darkest night, when the winds howled and the tempest roared, making thy companion feel a mere atom upon God's great, dark prairie; when the north wind soughed as though earth, our own mother, exhaled her foulest breath that we might have chilliest air.

Naught were these to thee, old friend, but to thy companion much.

Though laid away, thou the blest of us two, no errors to thee are charged against the last great day.

Honest, faithful, trying to be true, to thy companion came grief; perchance errors, who knows?

Sounds of the wailing and moaning, grim death, the last child, the bride of a day, dead.

All these hast thou witnessed, yet silently. And to these thy ears inanimate were closed. But to thy companion, what fears, what misgivings, lest duty might have been truant, or the contents of thy vials misapplied.

But not so always. For many a time and oft to the woman and children, the father and husband, faithful, did we restore; the babe to the bosom of fondest mother, the brother kind to sister dear.

Then would the heart of thy companion rejoice—thank God—that some little good had been done by thee and me.

Farewell, old friend! Old and battered, thy companion as thyself, is worn and weary with the weight of others' troubles, inanimate thou and animate I, we shall hardly meet again.

The next Medical Meetings of importance are the Kentucky State Medical and American Medical Associations.

Clinical Memoranda.

LARYNGEAL PAPILLOMA.

(Report of Case.)

BY T. C. EVANS, M.D.,

Professor of Ophthalmology, Otology and Laryngology, Kentucky University, Medical Department.

LOUISVILLE, KY.

In July, 1902, Mr. A., aged 50 years, was referred to me for an examination of the larynx. He suffered great impairment of voice and could not at any time speak above a whisper. The aphonia developed rather suddenly in November, 1901, or about nine months previous to the time he came to consult me. There was entire absence of pain and no dyspnea. On examination I found a small tumor situated in the receding angle of the thyroid immediately between the attachments of the true cords. The growth was small and apparently sessile. The patient gave no history of specific trouble. He was of a nervous temperament and had an excessively irritable throat. A satisfactory examination was accomplished with considerable difficulty. At that time no operative treatment was attempted, as the growth gave the patient no inconvenience aside from the loss of voice. Alcohol in a 50 per cent. solution sprayed into the larynx once a day was prescribed. This was gradually increased in strength until after a few weeks the patient tolerated a spray of absolute alcohol without inconvenience. In the meantime numerous examinations were made in order to increase the tolerance of the throat to instrumental manipulations. The growth steadily but slowly increased in size. As it increased in size it became distinctly pedunculated, and took on the general appearance of a papilloma. After the tumor became pedunculated the main body of it lay below the true cords. After a thorough trial of the alcohol, I resorted to the use of chemical caustics, using the tri-

* Reported to the Jefferson County Medical Association, October 20, 1903.

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chloracetic acid. This was applied once a week for several months. The application of the acid was followed each time by a laryngeal spasm, which gave the patient much discomfort. Owing to the location of the tumor it was impossible to limit the application entirely to the growth. Cocainization of the larynx prevented any pain from the cauterization, but for some reason did not prevent the laryngeal spasm. As the acid did not appear to retard the growth, it was abandoned, and several attempts were made to remove the growth with laryngeal forceps. Several varieties of forceps were tried, but with each attempt the chink of the glottis would close and the tumor disappear from view. I then devised a cold wire snare fitted it into the handle of the Schroetter-Turck canula forceps. I finally succeeded in engaging the growth in the fenestra of the snare and removed the entire tumor. Its removal was followed by no pain and the hemorrhage was inconsiderable. Notwithstanding the complete removal of the growth, the patient's voice remained unimproved for about forty-eight hours, at which time the patient was surprised to learn that he could speak in his natural voice. Since that time he has had no further trouble and there is no indication of a recurrence of the growth. A microscopical examination showed the tumor to be a true papilloma. After the removal of the tumor the patient was again put on spray of absolute alcohol, which he continued to use for several weeks.

Papilloma is by far the most frequent of all the benign tumors of the larynx. A benign tumor of the larynx is usually defined as one which shows no tendency to general dissemination and does not occur after thorough removal. The latter part of this definition would seem to exempt one variety of benign growths, viz., papillomata, which do show a disposition to return after apparently complete removal. Many cases are on record in which apparently thorough resection followed by cauterization through a thyrotomy wound has proven ineffectual. The etiology of papillomata is obscure. In a general way, it may be said that circumstances which promote hyperemia act as predisposing causes. Voice strain, local irritants and a tendency on the part of certain individuals to neoplastic formations are included among these causes. The symptoms include alterations of voice, cough, more or less interference with breathing, laryngeal spasm, etc. The tendency to malignant degeneration of benign growths in the larynx has been the subject of much controversy. The testimony is for the most part in refutation; Semon finds from extensive statistics that malignant degeneration is less marked when operation has been done than when the tumor has been let alone. The verdict of this question must be that malignant degeneration of an innocent neoplasm as a result simply of irritation or traumatism is not proven. When a cancer germ has been identified it will be easier to believe in the possibility of such a change. In the meantime, the practice of endo-laryngeal surgery may be continued in skillful hands without fear of instituting a malignant character in benign tumors.

Papillomata commence in the papilla of the mucosa, involve the epithelial cells and form warlike growths. They are usually situated on the vocal band and at the anterior part of the larynx. They rarely occur elsewhere, and almost never at the posterior commissure. A form of excrescence resembling papilloma may occur in tuberculous laryngitis in the inter-arytenoid space. Papillomata are generally more or less pedunculated.

Surgically, their removal is accomplished with forceps, the guillotine, the curette and the snare.

A brilliant illumination of the laryngeal cavity, a tolerant subject and a firm, steady hand on the part of the operator, are indispensable to success in endo-laryngeal surgery. Under the most favorable conditions, the removal

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of a laryngeal neoplasm through the mouth is a procedure demanding considerable dexterity. A growth at the anterior commissure, and especially below the vocal bands, is not easily reached. Its structure may be so dense as to resist the action of cutting forceps. At first experience with forceps, even with a soft papillomata, one is apt to be astonished at its toughness, and to relax the hold of the instrument in the fear that normal tissues may have been seized. In event of failure from inaccessibility of the tumor, the propriety of an external operation is suggested. Thyrotomy is not to be lightly advised, both on account of the added risk involved in the operation itself, and especially because of the danger of permanent damage to the vocal functions. Mackenzie's statement that "An extra-laryngeal method ought never to be adopted, unless there be danger to life from suffocation or dysphagia," is probably as true to-day as it was then. A point strongly in favor of the endo-laryngeal method is the fact that recurrences have been much more frequent after thyrotomy than after the endo-laryngeal method.

In comparing the relative methods of intubation, endo-laryngeal operation, thyrotomy and tracheotomy, enough experience has accumulated to authorize positive conclusions in favor of the endo-laryngeal operation.

Knight, in his recent work, says: "As to thyrotomy in benign neoplasm of the larynx, when we read of Walker Downie's case of six operations in one year; of Permewan's two thyrotomies, cauterization and death from asphyxia; of Abbe's case of four thyrotomies, cauterization and tracheotomy, and finally of Lendon's seven thyrotomies in two years, followed by stenosis and a permanent tracheal tube, we are quite prepared to pronounce sentence of banishment upon this procedure. It is high time to discard an operation that is not only more or less hazardous, but gives no assurance of curing the disease for which it was performed."

The after treatment in these cases for laryngeal neoplasm consists in the adoption of bland and soothing sprays. Acute inflammatory stenosis following an operation within the larynx is extremely unusual, and the less interference during convalescence the better.

Society Proceedings.

[Reported by E. A. Forbes.]

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Friday, October 23, 1903.

ELEPHANTIASIS.

Dr. W. O. Roberts: Last May I presented this patient here with a very large penis, due to elephantiasis, with also considerable enlargement of the scrotum. Soon afterward I amputated his penis at my clinic at the University of Louisville, and I have brought him here to show the result. He was then incapacitated for work, but has now resumed his regular occupation. When he urinates, he throws the stream some little distance. I did not touch the scrotum, but you see how it has shrunken. I am not prepared to say anything as to the possibility of its recurrence.

The penis, you remember, was enlarged to within a short distance of the pubes, and the urethra was very much larger than an ordinary lead pencil. I stitched the urethra to the skin. He also had enlargement of the glands of both groins, and these were removed at the same time. There was no evidence of suppuration in them. I have not had any report as yet from the microscopist. The stump of penis healed up very nicely, and I had no trouble, except a little suppuration of the groin wounds.

I did the circular operation, leaving the urethra a little long, and stitching it to the skin.

CYSTITIS IN AN INFANT.

Dr. Louis Frank: I expected to present a patient here to-night to get the

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opinion of the Society as to what it might be. It came under my observation several days ago, a child 15 or 16 months old, of healthy parents. It had been in the best of health until within the past six or seven weeks and presented nothing at all out of the ordinary, having none of the diseases incident to infancy. At that time it began to fret a great deal without apparent cause, and after a time the mother noticed that this fretfulness came on just preceding urination and lasted for a few moments afterward; also, that micturition became more frequent and that the child could not nurse very well on account of this discomfort and began to lose flesh. She then called in a physician, who thought it might be due to irritation of the prepuce, but retraction of this did no good. The child was for three or four weeks under the observation of Dr. Bland, of Shelbyville, with a temperature ranging from 101° to 102½°, and he sent it here, thinking it had trouble inside the bladder. The microscopist reported a number of pus cells in the urine, a small amount of albumin, no blood, alkaline re-action. It was evidently the urine from a case of cystitis. I sounded the child's bladder, but could feel no stone in the bladder; but I still feel that there must be a stone there. I made this examination under chloroform. I found the abdomen distended, the liver very large; both kidneys were shoved down abnormally low, reaching to the crest of the iliac bones, the upper portion reaching to the border of the lower rib. The spleen was also large and could be felt easily below the free margin of the ribs. The lower part of the abdomen was not distended at all. I have been washing the bladder out with boric acid solution with some amelioration of the symptoms.

If this is a case of stone, it is a remarkably young child to have such in the bladder. If it is not a stone, what is the cause of the cystitis? I do not think it can be tuberculosis of the kidney or bladder, for there has never been any blood and no polyuria. There has been no history of gonorrhea, and there was absolutely no discharge. I know of no explanation for the cystitis, except upon the hypothesis of stone. If the child is not decidedly better in the next three or four days, I intend to do a cystotomy, which, I believe, is justifiable. Its temperature this morning was 100°. It could not be due to seat-worms, and has no history of pain or appendicitis.

DISCUSSION.

Dr. W. O. Roberts: One would naturally suspect stone, or tubercular disease. I think exploration would be justifiable.

Dr. C. Skinner: I am rather inclined to the tubercular theory. There is too much fever for stone, and the age is against it. There is very little pus in the ordinary stone cases. I would advise exploration at once.

Dr. Louis Frank (closing): We can get about half an ounce of fluid into the bladder now. The cases of tubercular cystitis and nephritis I have seen have gone on very insidiously for some time, with blood and polyuria. The tubercle bacilli are always easily found, though none have been found here. Still, it may be tuberculosis. There is no tubercular history.

[Reported by E. A. Forbes.]

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Friday, November 6, 1903, with Dr. Ben Carlos Frazier in the Chair.

RUPTURED TUBAL PREGNANCY.

Dr. L. S. McMurtry: This specimen was removed from Mrs. C., aged 39, married nineteen years, never conceived, in good health most of the time, who missed her menstrual period last July. On August 18 she was seized with a violent attack of abdominal pain, and she has been confined to bed since that time. After this first attack the flow came on soon afterward, and continued with slight interruptions until

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the present time. When she was admitted to my infirmary, twelve days ago, she was very pallid and had a small pulse. On examination of the pelvis, I found it choked with a tumor above the pubes, over the right side, which was very firm.

The interior of the pelvis was packed. I did a section the day before yesterday and found half a gallon of blood clots and this specimen, which is a ruptured tubal pregnancy. The omentum was capped down over the mass and all of the peritoneal surfaces were agglutinated over the roof of the pelvis, and the blood clot occupied the whole pelvis. You will observe the sclerotic ovary and tube of the opposite side, which was removed because the tube showed signs of inflammatory disease.

There is also a fibroid, which is evidently a pedunculated uterine fibroid which has migrated and attached itself to the broad ligament, which is the way in which the majority of broad ligament fibroids form.

FIBROID TUMOR.

The second specimen is not so large, but almost as interesting. This is from a woman of 41, who has never married, never conceived, who has presented for the past two years all the symptoms of fibroid tumor of the uterus. She had a nodule attached to the right side of the uterus and uterine hemorrhage with a great deal of pain. She was in the early stages of the opium habit on this account.

I opened the abdomen yesterday and found this large ovarian hematoma agglutinated to the uterus and bound down with adhesions. There was also a growth in the other ovary simulating fibroid of the ovary. I will make another report on the case after the microscopic examination.

Both of these patients are well along in convalescence and will recover.

DISCUSSION.

Dr. Ap Morgan Vance: Both of Dr. McMurtry's specimens go to prove that we cannot always tell what is in the belly until we cut it open, and not always then. I agree with his diagnosis.

Dr. W. O. Roberts: The first case was especially interesting to me on account of the lapse of time since the hemorrhage occurred. The abdomen was full of blood, but it looks like fresh blood to me. There must have been some oozing ever since.

Dr. Louis Frank: The clot looks very recent, but we know these clots often retain a recent appearance. This may be due to the hemorrhage taking place gradually, and the temperature of the abdomen, and because it is not inside of the peritoneal cavity. I have seen cases very similar to this where I was sure the bleeding had gone on for several months. I think a more remarkable thing about this case is that the woman did not bleed to death. Again, she did not have the infection, which so frequently occurs. I can understand how difficulties will arise in such cases. I remember one in which the woman had been bleeding for a number of months. From the location and character of the tumor, we thought she had appendicitis. The bleeding in that case had been into the peritoneal cavity.

I think the other specimen is also interesting, in view of the recent investigations in connection with ovarian pregnancy. Croft and others have shown that many of these cases may be due to ovarian pregnancy, and we should bear this in mind in studying the pathology of these cases, all of which have heretofore been called ovarian apoplexy. Careful search should be made for decidual membranes.

GALL-STONES.

Dr. Ap Morgan Vance: This case was operated on October 25. The woman was 63 and had been suffering for two years with gall-stone colic, with intense jaundice for over a year. She was in very bad condition and had been taking morphine in large doses for relief. She had fallen off about fifty pounds in the last few months. As a forlorn hope I operated and found the

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gall-bladder very deep down, with firm adhesions. It was stretched tightly over this stone, and I had to feel the grit of the stone before I could tell what it was. It was covered with black, tarry material, which showed there was no other stone there. The bile came away as soon as the impacted stone was removed, and I introduced a tube and made a well of gauze to the gall-bladder and closed her up. I managed to keep her alive forty-eight hours, when she died. The stone burst spontaneously as it dried out, showing a similar one as a nucleus, and this explained the indefinite facets on the outside of the larger one.

PLACENTA PREVIA.

This is a five-months fetus with placenta. The woman was 26, mother of three children, was about five months pregnant. She sewed all day on the machine, then took a long walk and went to bed very tired. When she woke up the next morning she found the bed saturated with blood. The family doctor was called and he attended her for a day, when the discharge from the vagina appeared fetid. He thought the child was dead and sent for me to evacuate the uterus. When I saw her at the infirmary there was no discharge and the fetus was alive. I got the bowels to move, and by examination of the cervix could make out what was evidently the placenta. I decided to await developments, but two days later she had a slight hemorrhage and four days later another. I then decided it was a placenta previa and decided to empty the uterus. I set the operation for 4 o'clock, but at 12 I got a hurry call on account of hemorrhage. When I got there I found her very much exsanguinated and more blood than I ever saw before, with but one exception. I immediately chloroformed her, cleansed the vagina and saw there was simply a flood coming from the os. I put in my index fingers and dilated the os, tearing it up to the body of the uterus, in the line of a former tear. I immediately went through the placenta with my hand, caught the foot of the child and pulled it down. It was central implantation. I then trimmed up the side of the cervix and sutured it and put the woman to bed, lightly packing the uterus. She made an uninterrupted recovery. It was the first case of this kind I ever saw. Ordinarily these cases do not bleed until the seventh or eighth month.

RESECTION OF THE HEAD OF THE COLON.

The young woman from whom this specimen was obtained was 29 years old when she came under my care, in September, 1899; she was unmarried and a virgin.

A history of invalidism for four years was obtained, with great tendency to constipation. Examination revealed evident disease of the ovaries and tubes of both sides, with an irritating discharge from the uterus, all tuberculous, in my opinion. I did a section, removing the appendages, and did a thorough curettement of the uterus. She was soon up and well, surgically speaking, but a train of nervous symptoms appeared, attributed to the anticipated menopause. After a year, however, she complained of considerable pain at times in different parts of the abdomen. Examination revealed nothing definite. Tonics and medicine directed to the constipation being prescribed, she gradually improved, and was finally apparently well. In March, 1902, she came to the city again, suffering with a large abscess in right side of abdomen, which had opened spontaneously, on the cars, discharging a great deal of stinking pus, through the site of the former section wound. She was septic to the last degree, but gradually improved in health, a small sinus being left, with a granulating ulcer the length of original wound around it. In July, 1902, the discharge had apparently ceased, and under chloroform I endeavored to cure the wide ulcer, but found that the sinus was still there, the direction being to

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the right iliac region. I curetted the whole granulating surface and the sinus, closed the original wound, and buttonholed the sinus to the right. The incision closed primarily, and after a while, the discharge ceasing, the sinus was allowed to heal. In a very short time, however, an opening recurred in the center of the abdominal scar, which has continued to discharge up to ten days ago, for the last three or four months, occasionally fecal matter came through it, dry and granular like it might be broken down enterolith. This confirmed my original idea that the abscess was from an appendicitis. On the 6th of this month I determined to do some sort of radical procedure in the case, as the general condition of the patient was growing worse, and the difficulty in getting a passage through the bowels was greater. After dissecting the sinus down to its source, which was the base of the appendix, it came away, leaving a large opening into what proved to be the cecum, which was contracted down to the size of the sinus, the walls breaking down as the mass was lifted out of the median incision, exposing the ilio-cecal valve of the one side, and the lower end of ascending colon on the other; both were stenosed, hardly admitting a match. The mesentery at the junction of small and large bowel was greatly thickened and several large glands were felt. I was rather taken aback for a moment when this picture presented, but immediately determined on a resection, which I did by the modified Wolfers' method, anastomosing the ileum to the colon, end to end, removing a large mass of mesentery, glands and intestines. The suturing was done entirely with small catgut, No. 5, the mesentery covering the colon being finally grafted over the intestinal work to make doubly sure of a successful closure. It is now ten days since the procedure and the patient is practically well. I present here the specimen and a photograph of same illustrating the position of the different parts.

DISCUSSION.

DR. L. S. MCMURTRY: I want to congratulate Dr. Vance on his success as an obstetrician, for he has successfully dealt with one of the most difficult problems in obstetrical practice. Recently the question of Cæsarean section for placenta previa has been under discussion among obstetricians and advocated by many, meaning section at term. It is very unusual for placenta previa to present the clinical aspect that this did at the fifth month. Dr. Vance dealt with it in the most orthodox obstetrical manner, bringing down the feet so as to make a tampon of the fetus itself.

The last specimen is one of very great interest. The history is very instructive, and the specimen shows that the extreme pathological conditions may obtain and function still be maintained. It would be interesting to know the pathological process that brought about these lesions, and I agree that it was probably tuberculosis. The management of the case is beyond criticism.

DR. W. O. ROBERTS: I have never seen but one case of placenta previa, and that was partial. I think Dr. Vance managed his case admirably. The other specimen I should say is undoubtedly tuberculosis. In connection with the resection, I will report a case I operated upon three weeks ago. The patient, a boy 14 years old, was sent to me by Dr. Applegate, of West Point, with the following history: He had had appendicitis three years ago, which resulted in the formation of an abscess that ruptured into the bowels, and over a pint of pus was passed. He was confined to bed for six weeks, and he had held himself bent forward and to right side for over a month after being up and about. He had suffered from constipation ever since this attack and very frequently had to resort to the use of purgatives. Last February he had obstruction of the bowels which continued for four days, and since then his bowels had been more sluggish than ever.

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When I saw him he had not had an action for one week. His abdomen was very much distended and he was suffering considerably from colicky pains. Tenderness on pressure, while not marked, was complained of below the umbilicus and just to the right of the median line. He had had a great many purgatives and enemas with no result. He had vomited several times a day since the obstruction occurred, but it had never been stercoraceous. His temperature was 99½° F., pulse 108.

Immediate laparotomy was advised. I opened the abdomen by a free incision below the umbilicus and along the outer border of the right rectus muscle. The intestines were so distended that a considerable loop of them popped out as soon as the abdomen was opened. In attempting to replace them I made a slight rent in the serous coat. Thinking then it would be best to empty the bowel, I stuck a knife into it, and fully a quart of fluid feces was evacuated; of course precaution was taken to protect the cavity. After the bowels were thoroughly emptied I closed the intestinal wound and began my search for the seat of obstruction. The appendix, which was found bound down by strong adhesions, was first removed. I then found near the median line of the abdomen a large mass of adherent intestines. After it was disentangled a tight stricture was found in the ileum, about six inches from its cecal end. This was resected, and an end to end anastomosis was made with a Murphy button. While the patient was removed from the table with a very "rocky" pulse, he soon rallied, and within twelve hours there was a free normal action of bowels. From now on his recovery was uneventful. On the evening of the ninth day I found the button lying in the rectum and removed it.

Dr. Louis Frank: I think Dr. Vance did the right thing in the case of placenta previa and also in that of intestinal obstruction. These cases illustrate the fact that we cannot tell what we are going to strike until we get into the abdomen. While I congratulate Dr. Vance and Dr. Roberts on their surgery, in the first case he did not have the uneasiness about the Murphy button. We must always be prepared to do this class of work without the aid of mechanical devices, which we do not always carry around. I believe, with Dr. Vance, that the direct suture is the best method in the majority of instances, and we should all perfect ourselves in this method. Some men depend so much upon surgical devices that they neglect the direct suture method entirely. We always have needle and thread and fingers with us, and the suture method has no disadvantages, but the mechanical devices do have. I believe suture with catgut is the proper procedure in these cases.

Dr. Vance (closing): I sew the inside of the intestine with interrupted sutures, doing the modified Wolfler operation. Over that, commencing at the mesenteric angle, I use the continuous Lambert suture. I reflect the mesenteric material of the colon over the ileum and quilt it down.

[Reported by E. A. Forbes.]

THE LOUISVILLE SURGICAL SOCIETY.

Stated Meeting, Monday, November 9, 1903, Dr. J. M. Ray in the Chair.

OSTEO-MYELITIS, WITH EPITHELIOMA OF SKIN.

Dr. J. G. Sherrill: This patient is 50 years old, and was referred by Dr. Weidner, with a history of osteomyelitis for thirty years. He has recently had great pain at night, and the discharge had become very offensive. On January 16, 1902, I removed all the tibia, except a shell, and repair went on nicely, except at the upper extremity. On April 30 the necrotic area was curetted. Some improvement resulted, but in January, 1903, the ulcerated spot was larger, and had a malignant appearance, and again the disease was more radically removed, but no permanent relief obtained. Dr.

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Weidner examined the specimen from the upper part of the sore, and found evidences of malignancy, and a second examination, by Dr. John E. Hayes, confirmed this beyond question. At present a raised and ragged ulcer presents at upper part of leg. The peculiarity of the case has been the healing of the greater part of the area, and the refusal of the upper part to heal. This condition began in the skin margin, and not at the point where the bone disease was. He was advised to try the X-ray, but was not inclined to walk there for treatment on account of the pain. I deemed cauterization of no benefit in this case, but he has refused amputation so far.

I have not examined his groin recently, but some time ago there was little evidence of involvement. The case has been rather slow in its progress, and did not begin to look suspicious until January of the present year. We did not remove the leg, in the first place, because he is a working man, and wanted to save his limb, if possible.

DISCUSSION.

Dr. Carl Weidner: I have seen this man from the beginning until within the last few months. This operation was almost a complete removal of the tibia and the progress following it was very favorable. One disturbing element was a form of scaly eczema of the skin, the entire leg being affected. The first operation consisted of scraping the necrosed bone, and even at that time the surrounding parts looked ugly and raised the question of malignancy, but after examining it I thought perhpas it was a papilloma. When the more complete operation was done there was no longer any doubt as to the histological condition. It is about as typical a specimen of epithelioma as I ever saw. At the first microscopic examination there was no marked ingrowth, and this was true of the second, but that is nothing unusual. I did not notice any ingrowth from the epithelium, but the deeper structures seemed to be filled with epithelial masses. An interesting question to the surgeon is the relation between this condition and injuries. When a low vitality exists for a long time, it affords a favorable nidus for the development of malignant growth. I think amputation is the only thing that offers any hope now.

Dr. J. B. Bullitt: The case seems to be a good illustration of the fact that any chronic point of irritation is likely to become malignant at any time. The chief question now is, What is the best thing to be done? It seems to me the man is taking a great risk in postponing the radical treatment of the disease. If it has not already been disseminated through the lymphatic circulation, every means should be taken to prevent its doing so. If I had a malignant condition of the leg I do not think I would want it amputated the first thing, for I do not think the facts warrant the conclusion that the X-ray would be useless. Still, I would not want to leave it entirely to that. I would first want it cauterized with hot irons and then have it subjected to the X-ray. If the growth continued, then I would want amputation.

Dr. T. L. Butler: Even without the microscope the diagnosis of malignancy is almost certain. I think the safest thing would be to amputate above the knee, but if it were my own leg, I believe I would take the chances of something less radical. I would have it curetted and then use the red-hot iron thoroughly. Even if he has affected glands in the groin, it does not follow that these are malignant, for there has been enough inflammatory action to account for them. I would also want to try the action of the X-ray, but I would not depend entirely upon that.

Dr. H. H. Koehler: I feel satisfied the X-ray would not benefit this case, and it might cause dissemination of the cancer virus. I have had two cases in which this has occurred. I would advise amputation.

Dr. Turner Anderson: I have been a decided advocate of the cautery in the

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treatment of epithelioma, but the cancer paste might do as well as the actual cautery. I have removed epithelioma of the face and had it return very promptly. I have removed them with glacial and sulphuric acid and had them never return. If it were my leg, I think I would have the paste applied, and burn it very thoroughly. Dr. Sherrill has done all that can be done with the knife, and the man has enough bone left to get a useful leg if it would heal up. I have several cases in mind in which sulphuric acid succeeded when everything else failed. One case, operated on by Prof. Roberts, recurred within three months; it was then treated with sulphuric acid, and has entirely disappeared. It may come to an amputation, but I think I would try the other first.

Dr. James Vance: The application of the X-ray after the actual cautery would probably not reach all the cancer cells in the muscular structures and perhaps higher up. And in view of the patient's objection to its use, there is nothing left but amputation high up. It depends upon him whether he wants to run a greater risk of losing his life. Further treatment will increase the danger by disseminating the virus through the structures. I am inclined to believe amputation is the thing.

Dr. August Schachner: The man should be given to understand that he assumes the risk, and that in trying to save the leg he may lose his life. I think a little more than half the chances are against him with the X-ray. Most of the affected material should be taken away first if the X-ray is used. I question whether it is justifiable to take the risk when you consider how well he could get along with an artificial leg.

Dr. Sherrill (closing): When we first operated there was a suspicion of malignancy, but not enough for us to give it much thought. It had a very foul odor at the time which the family could not stand any longer, and an effort was made to save the limb by radical operation on the bone. We gave it a fair chance by letting it go for a year, when Dr. Weidner thought it malignant, but could not say positively. The second operation in the spring of the present year made it positive. The size of the sore has greatly increased in the last few months. The patient has a poor leg at best and has already lost two years, and more time would be lost and suffering involved if the paste were used. I believe the man would be foolish to trifle any longer on account of the danger of secondary involvement, and hence I have advised operation.

PERFORATED APPENDIX.

Dr. J. G. Sherrill: This specimen of perforated appendix was removed on the seventh day of an attack which began with a menstrual period, which tended to confuse the symptoms. On the sixth day of her trouble her physician asked me to see her, and I confirmed his diagnosis of appendicitis. I saw her on the following day, and, as no improvement was noted, sent her to the St. Anthony's Hospital, and operated that afternoon. After evacuating a pint of pus, I removed this gangrenous and ulcerated appendix, and a mass of inflamed omentum, and drained. Considerable sloughing of the wound occurred, but she went home well in four weeks. Before leaving the hospital, she complained slightly of pain near the umbilicus, and on October 14, about five weeks after the operation, she had an attack of vomiting and abdominal pain with no fever. This was attributed to indigestion and was relieved by a purgative. On October 23 she began to have pain near and to the left of the umbilicus, severe and spasmodic in character, without fever. On the 24th she had a small stool, but none from that time up to Tuesday, October 27th, when I made a diagnosis of functional obstruction due to a band. Temperature at this time was 99 1-5°, with scarcely noticeable distension of the abdomen. Upon opening the abdomen the diagnosis was verified, and the constricting band, one and a half feet above

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the ilio-caecal valve was divided. She has done nicely, and is at present able to sit up.

DIVERTICULUM.

Henry K., aged 4, was seen November 3, 1902, with Dr. Solomon. Some weeks ago he suffered an injury, and Dr. Vance opened an abscess in the abdominal wall which was apparently due to an infected hematoma. When I saw him there was some fullness and rigidity of abdominal wall with more or less fixation of the spine, so marked that a diagnosis of Pott's disease was made. December 15, 1903, this was shown to be a mistake, and I opened an abscess in the wall near the umbilicus through an old scar. Some improvement, but recurrent attacks of pain, with fever and local evidences of inflammation, occurred at intervals. The tumefaction would subside upon a discharge of pus through bladder or bowel. Drs. Vance and Solomon saw the case with me several times when operation was thought inadvisable, and several times the little fellow was in grave condition. There had been slight improvement by July 30, 1903, when I operated, assisted by Dr. Vance. A small abscess in the abdominal wall was opened and drained, and while exploring it with my finger the peritoneal cavity was invaded. The wound was enlarged and I removed a mass of omentum and a diverticulum extending from the small gut to the umbilicus. It was the size of an appendix at the intestinal extremity, but dilated and as large as the thumb at the opposite end. It was lined with mucous membrane and was very similar to normal intestine. The healing was uninterrupted except on the fifth day I noticed a drop of pus beside one or two stitches, which were removed, and the crying of the child forced out several feet of intestine, necessitating anesthesia and a secondary suturing. The child made a good recovery.

DISCUSSION.

Dr. August Schachner: The first specimen represents not an unusual complication, and it is not strange when we consider that in trying to keep away from the peritoneal cavity adhesions may be overlooked. I have met with it only once in appendectomy. The second case is very interesting, as these cases are pretty rare.

Dr. J. B. Bullitt: The danger of obstruction following certain conditions is always to be considered. It has been my misfortune to observe several cases where peritoneal inflammation had begun at the time of the operation. In those cases which are on the border line there is grave danger of development of secondary interference with the function of the bowel. We would not always find these conditions present even if the field were carefully searched at the time. But when obstructive symptoms supervene it is a great mistake not to open up the abdomen at once and make a careful search. I remember one sad case in which life might have been saved if this had been done.

Dr. Carl Weidner: As to the second case, I think I have seen it, and made a diagnosis of tubercular peritonitis. It seems to me that with a suppurating cavity there would be pus or blood in the urine continually, but I think the urine was perfectly clear. We did find casts and albumin. I am in the dark about the case.

Dr. J. G. Sherrill: The case was very confusing, and when I did the operation I was not sure it was a diverticulum, but the connection was with the small gut. I cannot say whether pus escaped through the bladder, but Dr. Solomon said it did, and the mass disappeared. At another time the pus was supposed to pass through the bowel, and the mass again disappeared. This time I remember distinctly that both Dr. Vance and I hesitated to go in because there was no swelling. Dr. Solomon urged us to go in and we did. The diagnosis was modified several times, and we found that the rigidity of the spine was due to rigidity of the abdominal muscles. I cannot explain it in any other way except as a diverticulum.

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Dr. Ap M. Vance: I saw this case a year ago, in consultation with Dr. George Leachman, and he told me Dr. Schachner had seen the boy. Dr. Schachner was going away, and wanted me to keep track of it. The boy had been run over by a buggy, but did not seem to be very much hurt. He was anemic, and had a tumor about an inch above and to the left of the umbilicus, without any redness. I was sure this had fluid in it, and I turned out three or four ounces of the material ordinarily found in a cold abscess. This healed up and the child went home.

The next time I saw him he looked like he was going to have triplets. I gave him castor oil, and the day following he looked natural. The next time I was called, the abscess cavity had filled up. Then he was under Dr. Solomon's care, with Dr. Sherrill consulting, and he had a plaster jacket on him as thick as a table. They called me in, and I said he did not have Pott's disease, and convinced them that he did not. We decided to operate on him, and one time the swelling would be about the liver, and again to the left of the umbilicus. Finally the nurse said he was passing pus through the bladder, and I saw the urine more than half pus several times. Then obstruction of the bowels developed, and we got ready to operate, but thought he was already dying, so let him alone, and he got better. This was unquestionably Meckle's diverticulum, which had become attached near umbilicus. It was found attached to the urachus, and had an opening toward the bladder. It sprung from the ileum, about a foot above cecum.

MYO-FIBROMA.

Dr. Turner Anderson: This case came to me from Indiana and was operated on last Tuesday. She looked like she was going to have more than triplets. She was a large, fleshy woman, but in the enjoyment of good health except discomfort from this distension. She had none of the usual evidences of ovarian tumor at all, and had been unconscious of anything being the matter with her until last May, when she discovered a tumor on the right side, which grew very rapidly. Her menstrual life had been without incident and she was the mother of four children, the youngest being 6 years old, having had a child after she was 40. She had ceased to menstruate about two years ago, her present age being 48.

Upon opening the abdomen I saw this large tumor and discovered that it was not ovarian. I tried to puncture it, but found it solid, filling the abdomen so completely that I had to enlarge the incision. She also had an umbilical hernia, which I cut out at the same time. The tumor involved the front of the uterus and turned that organ upside down. I delivered the tumor and did an ordinary hysterectomy. Another fibroma was found in the recto-uterine pouch, plainly interligamentary.

This woman has done nicely, with no bad symptoms at all. I treated the case sub-peritoneally.

PAPILLOMA.

This specimen is interesting on account of the frequency with which they are met. The woman was 36 and was operated upon Wednesday. She also had two tumors. She had never been married. You will see that the tumor is full of warts, but there are none on the outside. The uterus is exceedingly small; none of the ovary was left at all.

Growing from the opposite side, behind the uterus, was this other tumor. It is an interligamentary ovarian cyst. The adhesions were so many that I had to make a blunt dissection and do a hysterectomy. I think the patient is well. Her bowels moved to-day, temperature below 100° and no bad symptoms at all.

There was nothing unusual about the peritoneum at any point. I meet with a great many of these cysts. The point of importance from the clinical standpoint is that we have no means of diagnosticating this condition before opera-

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tion. When the growth is inside of the tumor it does not change its physical appearance, and we cannot tell what we are dealing with. In 145 operations, Kelly found 45 ovarian papillomata, and he regards them as "semi-malignant." I can look back on a number of cases operated on many years ago, and they have made permanent recoveries.

I find that the warts in the tumors behave a good deal like warts on the skin. This is the smallest uterus I have ever seen.

DISCUSSION.

DR. LOUIS FRANK: The first case illustrates beautifully one of the degenerations that take place in fibroid tumors. We have here a tumor attached to the anterior part of the uterus, pushing the bladder away in its development. It has undergone edematous degeneration, and if it had been allowed to remain true cysts would have formed.

The second specimen is also very interesting, and, like Dr. Anderson, I find them quite common. I have operated on a few cysts of the ovary, but have not met this character with the same frequency. Probably 10 or 12 per cent. of the so-called ovarian tumors have this papillomatous character and I look upon them as exceedingly dangerous, and think the term "semi-malignant" as applied to these and also the proliferating or glandular ovarian adenomata is a good clinical name. There is also danger of papillomatous dissemination through the peritoneal cavity, which generally leads to a fatal termination. Clinically, the cases I have seen have been characterized by fluid in the belly itself. Most of those I have seen have been true intra-ligamentary tumors, beginning in the hilum of the ovary. Some of these papillomatous tumors are par-ovarian in character, but I believe this specimen is intra-ligamentary.

Notwithstanding the excellent results in this case, I believe we should be guarded in our prognosis, for they do sometimes recur in the pedicle and terminate fatally. We cannot tell positively what will be the outcome in these cases.

DR. AP M. VANCE: I was very much interested in the first case. I have seen but two soft myomata, and both were diagnosed ovarian cysts. I showed one to the Society about twelve years ago; it weighed 27½ pounds. It seemed to be an ovarian cyst, and I believe it is impossible to differentiate between them. I put the trocar in and got nothing; so I delivered it. I had never seen a hysterectomy done then. I tied the pedicle with a silk ligature, and used two hat pins to support it in lower angle of incision. The woman recovered. She never paid me anything, and cursed me as long as she lived.

I saw another case soon after that I thought was one of these. I helped Dr. McMurtry operate; it was multilocular and contained six kinds of fluid.

The second class of tumors I have seen quite often. One case I operated on three times, losing her the last time. Dr. Bullitt made the same diagnosis the second and last time, but others made various diagnoses. It was unquestionably a malignant growth, and the contents were the same as this. I agree with Dr. Frank that they are dangerous, and if anything is left they will recur. Dr. Anderson seems to have gotten everything in this case.

DR. AUGUST SCHACHNER: The first specimen shows degenerative changes, and it could not have had a great deal of nutrition with that attachment. I operated on a similar case with an attachment like this. It was a fibroid cyst and the solid portion was on top of it just like a hat on a head. It was the largest tumor I had ever seen, the abdomen being about five feet in circumference. The ensiform cartilage was pushed up and portion was pushed out of the vagina, the urethra being in a gangrenous condition. I thought I had a big one, but when I took the specific gravity of the contents and estimated its weight I found it was less than eighty pounds; I thought it would run

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above one hundred. It showed me how easy it is to overestimate the weight of a tumor.

As to the second class, the best account I have seen is that by Bland-Sutton in his work on diseases of the ovaries. He considers them on the border line of malignancy. The case which Dr. Frank mentioned was an adenocystoma which developed on the right side, having developed in about five months. When I operated on her she looked like a woman at full term. I aspirated the larger cyst and got a lot of mock-turtle-soup-looking material, and Dr. Dugan, who was present, thought we had gotten into the stomach. This was in November, and about the same time next year she presented herself with another about as large as the first. That side had not been examined at the first operation. This tumor had also grown in about five months. After its removal the woman finally died of recurrence a year later.

Dr. Carl Weidner: I have only one suggestion to make. The second specimen is a papillomatous ovarian cystoma, and most of these terminate malignantly. We used to hear a great deal about tapping these tumors, and when I was a student the fluid was spoken of as being of different kinds, and I believe there is something in that after all. In the majority of tumors with clear fluid and the presence of but few cells, it is pretty safe to call them benign. While blood may occur in any condition, it is far more frequent in the contents of cancerous cystomas. In that case we have a brown fluid of a higher specific gravity, richer in albumin, and when sedimented we would find a larger quantity of epithelial cells, which may aid in making the diagnosis. Aspiration and microscopic examination of the aspirated fluid will often make the diagnosis clearer and the operative indication more accurate.

Dr. W. O. Roberts: I do not remember to have seen but one case of soft fibroma and only one of cystic degeneration in a fibroma.

The other case is exceedingly interesting to me. I had a case of papilloma of the ovary not long ago, with a great deal of cystic fluid, and the intestines and everything else were filled with warty growths. She went along for about four weeks after the operation.

Dr. J. B. Bullitt: In regard to the first specimen, it seems to me that the character of the degeneration of the fibroid is not purely cystic. The tumor has a peculiar whitish appearance. Dr. Bullock showed me a case of this kind which had been entirely isolated, and degeneration took place. I believe Dr. Schachner is mistaken in thinking that the degeneration is due to the smallness of the pedicle, for the lesser tumor has a larger base, but shows the same kind of degeneration. The circulation does play a large part, of course, but there are other conditions existing which have not been definitely determined. Most of us have observed larger tumors with as small a pedicle as this.

As to the second specimen, it seems to me the authorities have not been very clear in regard to the character of the various ovarian tumors. We have to distinguish three varieties clinically, the first being the proliferated cyst, smooth on the outside; second, the proliferating papilloma which has no sac, an outgrowth from the surface of the ovary. These cases are apt to be more malignant. Every one has seen papillomatous ingrowths in these tumors, yet I cannot recall one recurrence. The third class is known as endothelial tumors.

Dr. James Vance: The first case is unquestionably a large myo-fibroma with a small subperitoneal origin with insufficient blood supply. It does not make so much difference about the size of the pedicle, but the amount of blood supply is important. These rapidly growing tumors are apt to degenerate, and the cells of the uterus undergo fatty degeneration as in the case of involution after child-birth.

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As to the second, the German teaching is that 20 per cent. of all ovarian tumors are malignant. This one is unquestionably malignant, but the name "semi-malignant" is applied because the area of the adeno-carcinoma is confined within the cyst and does not invade the peritoneum and form metastises. I have seen but one case in which there was recurrence, and that was an adeno-carcinoma of the ovary with return in the abdominal wall. It is wise not to permit the escape of the fluid into the abdominal cavity. Metastises will not occur if the condition remains isolated.

Dr. J. G. Sherrill: I want to take issue with Dr. Schachner and Dr. James Vance as to the method of development of the degeneration. My experience is that these tumors grow very rapidly and that they have a large blood supply, are very soft and vascular, and the cysts form from serous effusion into the interspaces.

Dr. Anderson (closing): I agree with Dr. Schachner in regard to the most satisfactory article on tumors of this kind. Sutton thinks the surgeon should not be discouraged in operating, but should take heart in the matter of prognosis, because these warts disappear when the nidus is removed.

With reference to Dr. Bullitt's point, I remember that enormous, whitish-looking tumor which Dr. Bullock brought to the Society, and I took occasion to go over the subject. Lipomatous tumors in the pelvis may be post-peritoneal and grow to enormous size, without connection with any organ.

GUNSHOT WOUND OF THE BRAIN.

Dr. J. B. Bullitt: This specimen was taken from a man whom I saw in consultation. He had received a bullet wound from a 44 and at very short range, the point of entrance being to the left of the median line. The bullet hit the base of the nose and tore a hole through the frontal bone, and made a wound of entrance to the right of the nose, leaving a bridge of unbroken skin between the two. The appearance was as though the bullet had driven the bone into the brain and escaped. The man was put under an anesthetic and the bridge cut across and lifted up; the edge of the bone was found lying loose. We took out everything that was loose, but did not invade the brain deeply enough to discover other injury because we believed the ball had escaped. He went along for six days. When he was first struck it was reported that he was knocked down, but when Dr. McCarty sent him to me he said that he had walked over to the hotel and lain down. He was perfectly conscious and gave an account of the shooting. At the time I saw him, an hour later, he was a little hazy as to where he was. He went on for a week with a normal temperature and pulse, but at the end of that time his temperature went up and by 10 o'clock of the eighth day it was 108°; an hour later he died.

At the post-mortem I found that the bullet had split, part of it coming out through the wound of exit and the rest of it had gone back through the brain and was found in the cortex. The loss of brain substance was considerable, but it was in the so-called silent area. It was a curious thing to me that this man should have gone on for seven days with a practically normal pulse and temperature, which then went up so rapidly.

DISCUSSION.

Dr. McCarty: I was called to the Central Stock Yards Hotel to see this man and they said he was slightly injured. When I approached him he said he would go into the barber-shop. He walked in there and I thought it was only a flesh wound and I took him to my office in a buggy. When I put him on the table and found the broken bone I sent him to the infirmary. He was wounded on Friday night and died on Saturday night of the following week.

Dr. Ap M. Vance: These brain injuries are very interesting. These bullets carry bone, hair, and pieces of hat

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in with them. I remember one case of a little girl shot through the brain who got well. Another man shot himself with a large bullet back of the right ear, who was completely comatose and paralyzed on the left side, but got well. I can recall quite a number of persons who carry bullets around inside the skull. I also know of a number of seemingly slight cases that died. This division of bullets is much more common than we are led to believe. It does not take much to divide a soft bullet. I do not see how anything else could have been done in this case.

Dr. August Schachner: It has been pointed out that in injuries of the serous membranes temperature is not a feature, and it might be that the heat centers are located elsewhere. This would account for the low temperature for a week, and then the involvement of the heat centers gave rise to the sudden elevation.

LOUISVILLE ACADEMY OF MEDICINE.

The Louisville Academy of Medicine met at the Louisville Hotel on Wednesday evening, November 4.

Dr. James B. Bullitt exhibited a patient with varicose veins of the right leg, complicated by aortic insufficiency. The varicosity had existed as far back as patient could remember, and it was a question whether there was any connection between this and the condition of the heart.

Dr. G. A. Hendon exhibited a patient illustrating a remarkable result following operation for gun-shot wound of the abdomen. The patient had been shot just after a full meal with a 38-calibre bullet, which passed entirely through the umbilicus; the cavity was found filled with blood from a mesenteric vessel and fecal extravasation. Ten perforations were found and attended to and a posterior drain put in. Patient never vomited, digested his dinner and recovered without any trouble.

Dr. W. R. Blue read an interesting paper on "Some Dermatological Don'ts."

Dr. Kelsall exhibited a specimen of carcinoma of the uterus removed from a woman of 39. She had previously been operated on for pus tubes.

The Academy then adjourned on account of the lateness of the hour.

AMERICAN ROENTGEN RAY SOCIETY.

The fourth annual meeting of the American Roentgen Ray Society was held at the University of Pennsylvania, on December 9th and 10th. Prof. Arthur W. Goodspeed, the President of the Society, occupied the chair. The presence of this distinguished physicist in the chair had a fitting background in the great university itself, of whose faculty he is an honored member.

The best-known of the American X-ray workers were in attendance, and the five sessions of the meeting were replete with papers of great value and interest, dealing with the various important phases of therapeutical and diagnostic application, perfection of apparatus, and dangers of the rays to the patient and the operator. While a few years ago the danger to the patient was more apparent than the danger to the operator, yet now, with better apparatus, the operator is in more danger of effects which are cumulative than is the patient.

Officers for the ensuing year were elected as follows: President, Dr. Jas. B. Bullitt, Louisville, Ky.; Vice Presidents, Dr. John B. Murphy, Chicago, Ill.; Dr. Roswell Park, Buffalo, N. Y.; Dr. Charles Lester Leonard, Philadelphia, Pa.; and Dr. Harvey King, Montreal, Quebec. Secretary, Dr. Russell H. Boggs, Pittsburg, Pa. Executive Committee, Dr. Walter W. Johnson, Rochester, N. Y.; Dr. P. H. Hickey, Detroit, Mich., and Dr. Kennon Dunham, Cincinnati, O.

The place of the next annual meeting is not yet determined, but will be held somewhere in the Middle West.

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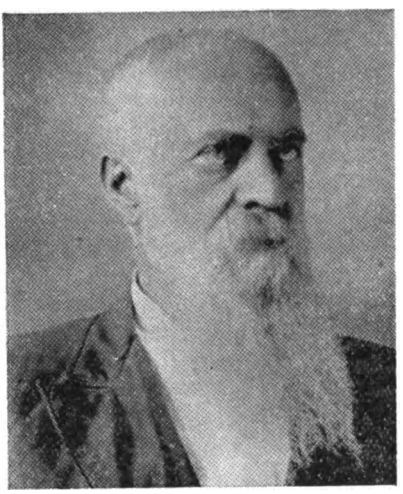
Obituary.

HAWKINS BROWN, M.D.

HUSTONVILLE, KY.

In presenting a memorial notice of the late Dr. Brown, the caution conveyed in the good old adage, "De mortuis nil nisi bonum," seems altogether superfluous, for certainly nothing praiseworthy could be said of him, nothing lovely and of good report, that would not find a ready echo in the hearts of all who knew him. He possessed to an



HAWKINS BROWN, M.D.

eminent degree those gentle and engaging qualities of mind and character which endeared him to all with whom he came into intimate relations. The sad circumstances of his taking off, the calm courage, the admirable patience and wonderful cheerfulness he displayed under the infliction of a long and painful illness, lent a peculiar tenderness to the sorrow with which the announcement of his death was received.

Dr. Hawkins Brown was born in Lincoln county, near Hustonville, on November 12, 1831. Few particulars of Dr. Brown's early life are accessible to me. He received his preliminary education in Stanford and at the parochial school in his native village. After being prepared for college by Mr. Charles Barnes, he entered the Medical Department of the University of Louisville, from which institution he received his diploma in 1854. He returned at once to his native village, where he continued to reside until his death, which occurred at 3 a.m., Tuesday, December 1, from angina pectoris. Early in 1899 he was compelled by the rapid and serious inroads of a disease, from which he had suffered for some years, to relinquish his active practice, and from that time until his death he was for the most part confined to his room.

Dr. Brown was pre-eminently a Medical Society man. He was associated with numerous medical organizations. He was a member of the American Medical Association for more than twenty-five years and was once its Vice President; of the Kentucky State Medical Association, and was the President at its meeting held in Louisville in 1893; of the Central Kentucky Medical Association, of which he had the distinction of being elected twice to the Presidency; of the Lincoln County Medical Society he was a charter member at its organization in 1868, twice its President, and remained an active member until the past few months. His relation with his home county medical society was the last link which bound him to his dearly beloved professional life. His interest in all things relating to its advancement and improvement continued a ruling passion, strong even to the day of his death.

Dr. Brown made few notable contributions to medical literature. He had little taste for literary composition and the engrossing demands of a large practice left him little leisure for this kind of work. He was ever ready to contribute his share to the discussion of papers and clinical cases presented before the medical societies of which he was a member. He was essentially a progressive man, always eager to lay hold of new modes of treatment. In

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his relation with his professional brethren, Dr. Brown was upright, honorable and just. Envy, malice, and uncharitableness were foreign to his nature. He was ever disposed to add to, rather than detract from, the good name and fame of a brother practitioner. Few men of so positive a nature have maintained such extended professional relations and aroused so few antagonisms. He had no enemies. He was gentle and courteous in his manners, endowed with great natural kindness of heart and a ready, overwhelming sympathy which at once engaged the confidence of his patients and led them to regard him, not only as a physician, but as a friend. To many of his patients he was their confidant and adviser, not only in matters relating to their health, but in their material interests as well. The helpful, human side of his nature was ever turned to those who sought his advice. He was fortunate in the possession of a cheerful, sanguine temperament. His buoyancy of spirit was infectious. His cordial greeting, his cheery words and his bright, confidant manner diffused an atmosphere of sunshine in the sick room and inspired hope in the hearts of his patients. Although he was attentive to the business aspects of his profession, he did not regard the practice of medicine in the light of a money-making calling. The ingratitude and lack of appreciation which he, like all professional men, sometimes encountered, did not sour his nature or make him misanthropic. He preserved in a singular degree the freshness of his feelings and fine faith in human nature to the end of his life. In this brief, but imperfect sketch of our late associate, we have the record of a life not remarkable for its incidents and achievements, but which illustrates in no ordinary degree those finer virtues and graces which adorn our humanity, and those qualities which ennoble and dignify our profession. A character so faithful to truth and rectitude must ever hold a dear place in our memories.

STEELE BAILEY.

Current Literature.

ADRENALIN AND ITS USES IN GENERAL SURGERY.

Under the above title an article appears in the October issue of the *Indian Medical Gazette*, from the pen of Harry Gidney, F. R. C. S. (Edin.), D. P. H. (Camb.), etc. The author finds that "the clinical usefulness of Adrenalin is very great and extensive, and owing to its power of rapidly and effectively producing vaso-motor constriction, it is adapted to the treatment of all inflammatory conditions. The drug is also of extreme value in arresting hemorrhage during all surgical operations. It is indicated whenever and wherever any local hyperemia exists, more especially in inflammations of mucous surfaces such as those of the eye, throat, larynx, pharynx, urethra, bladder, nose, rectum, vagina, uterus, stomach, etc. It is used not only to stay hemorrhage when it exists, but also as a preventive or controlling remedy, given either internally or externally prior to an operation, so as to lessen the amount of bleeding during the performance of that operation. It is a non-irritant to mucous membrane unless when used too frequently and in excess.

The author has found that the instillation of a 1-5000 to 1-2000 solution of this drug reduces the inflammation and considerably cuts short the process of conjunctivitis. He usually applies it (diluted) over the inflamed parts by means of a soft camel's hair brush. He always uses the preparation containing chloretone, which has a decided local anesthetic action, relieving much of the photophobia and pain. He is fully convinced of the power of Adrenalin to arrest or lessen the bleeding that arises from the cut ends of the iris after iridectomy. He speaks highly of its efficiency in chemosis, cataract operations, evisceration of the eyeball, operations for ectropion, symblepharon and trachomatous pannus.

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Louisville Monthly Journal

OF MEDICINE AND SURGERY.

"Alis Volat Propriis."

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EDITORIAL STAFF.

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H. HORACE GRANT, A.M., M.D., BUSINESS EDITOR.
HENRY ENOS TULEY, A.B., M.D., ACTING EDITOR.

PUERPERAL ECLAMPSIA.

The simple fact that so many theories as to the etiology of puerperal eclampsia have been suggested, is the best evidence that up to this time no theory is entirely satisfactory and acceptable. It has been not inaptly designated as the "disease of theories" by Zweifel. A discussion of these numerous theories in this connection is neither desirable nor necessary. Many of them are fanciful and have little to commend them, and consequently have received little support or attention. There is practical unity among theorists that eclampsia is produced by auto-intoxication, but the difference of opinion as to just what pathological condition leads to this intoxication accounts for the many theories.

The most generally accepted and strongly supported theory as to the cause of puerperal eclampsia was suggested by Frerichs, that it is of uremic origin. The belief in this theory is strengthened by the admirable studies of Bouchard, who attributed the disease to the presence in the blood of toxic material, the result of imperfect metabolism during pregnancy; which poisonous material should be, but is not, eliminated by the kidneys. In every discussion of eclampsia, uremia is considered; in all advice of prophylactic nature no one fails to direct attention to the kidney function; in every case of puerperal convulsion the kidneys are interrogated, and in an overwhelming proportion of cases the kidneys are found crippled and the eliminations insufficient. That puerperal eclampsia is something more than Bright's disease of the pregnant or parturient woman there can be little doubt, but what that something is, must yet be acknowledged a matter of conjecture. Theories to the contrary notwithstanding, the practical deduction for the "busy practitioner" is to anticipate puerperal convulsions in those who present the most unmistakable evidences of kidney insufficiency.

Preventive treatment is of the utmost importance. Most of the cases of eclampsia are unexpected because proper investigation prior to development has not been made by the attendant, and it is equally true that most cases could have been prevented by appropriate management. By proper diet the results of imperfect metabolism will not be added to the toxins, if toxins there be, already present in the blood. Every avenue of elimination should receive careful and persistent attention. Frequent warm bathing and suitable clothing are essential in the care of the skin as an emunctory. The importance of elimination by the intestinal canal can hardly be overestimated; constipation and sluggishness is to be overcome by cathartics and laxative diet. Urine analyses should be made at frequent intervals during the latter three or four months of gestation. The practical points in urinalysis to be ob-

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served are: The total quantity of urine voided in twenty-four hours, the specific gravity, the presence of albumin, and the amount of urea. A continued diminished quantity of urine of low specific gravity is of grave significance, especially when accompanied by headaches, disturbances of vision, nausea, insomnia and other nervous symptoms. Appropriate diuretics, of course, are indicated, and of these the free use of pure water is commended. The amount of albumin lost by the kidney is not of so much significance as the condition of the excreting structures of the kidney to which it points. "A diminution in the excretion of urea is, however, the most important pre-eclamptic signal, indicating kidney insufficiency; a fall of 1.5 per cent. is always dangerous" (Polak). This condition should be met by free diuresis, mild but repeated catharsis, warm baths, and insistence upon a strict milk diet and exclusion of meats.

There are three questions for consideration in the curative treatment: (1) Control of convulsions, (2) elimination of poisons, (3) termination of the pregnancy. Chloroform is the best agent to stop a threatened convulsion. After the convulsion has begun, neither chloroform nor anything else can be very effective, because the respiratory function is for the time being practically suspended. In any convulsions, however, subsequent to the arrival of the attendant nurse, much can be done by free administration of chloroform at the first sign of its approach. This means the most intelligent and unremitting vigilance until this danger is past. Chloral is the safest and best agent in forestalling the return of convulsions, it should be given freely in dose of 40 to 80 grains, by mouth or rectum. It does not interfere with efforts at elimination of toxins by any of the emunctories. This work can go on simultaneously with the efforts to prevent recurrent convulsions. In croton oil we have the most rapid, safe and efficient cathartic. The hot pack can be applied during this time. If the patient is robust two or three pints of blood should be drawn and an equal amount of salt solution injected under the skin. After elimination has been established by the skin and bowels, morphine is the most reliable remedy in controlling return of convulsions and should be used to supplant the continued or excessive use of chloral. The uterus should be emptied as soon and as rapidly as is consistent with safety in the interest of both mother and child.

JOHN G. CECIL.

THE PULLMAN SLEEPING-CAR.

Under this title, Dr. H. M. Bracken, of St. Paul. publishes in *American Medicine* an article in which he criticises the Pullman Company for improperly cleaning their cars. He quotes a paragraph, previously published in the same journal, purporting to come from the Pullman Company, giving in detail the precautions taken by them in cleaning the cars. These are ideal if carried out, but Dr. Bracken proves by the statement of an inspector, specially detailed to investigate, that the sleeping-cars are not cleaned and the bedding is not disinfected or aired.

The chief reason given for this is the demand for cars and insufficient help.

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The Pullman Company is a powerful corporation, entirely capable of carrying out the proper sanitary regulations in order to make their cars safe.

The Kentucky State Board of Health has taken steps to regulate the cleaning of sleeping-cars starting from cities in the State, and the profession should uphold the Board in its efforts. If necessary the State laws should be amended or new laws enacted enabling the Board to enforce such rules as may make these cars safe and habitable. As they now are, especially now that those afflicted with pulmonary tuberculosis are seeking change of climate, these cars are a special menace to the traveling public.

Notes.

Dr. Jas. B. Bullitt attended the recent meeting of the American X-Ray Society at Philadelphia, after which he joined his family on the Pacific Coast for the holidays.

Dr. F. W. Samuel has recovered from an attack of typhoid fever and has resumed his practice.

The Maltine Company, Brooklyn, N. Y., announce the publication of the two prize essays in permanent book form, ready December 15. Copies can be had upon request, without charge.

Dr. Irvin Abell, who was ill during November, has gone to British Honduras and Brazil, where he hopes to recuperate from a serious attack of sepsis, from which he has suffered.

The Fayette County Medical Society held its annual election of officers on December 15. The nominees for President were Drs. A. H. Barkley, W. O. Bullock, Jr., and N. L. Bosworth. The following officers were elected: President, Dr. N. L. Bosworth; Vice President, Dr. N. L. Simmons; Treasurer, Dr. J. J. Wilson; Secretary, Dr. D. J. Healey; Censor, Dr. Porter Prather; Delegate, Dr. T. H. Kinnaird.

Prof. C. Lewis Diehl, who has conducted a drug store at Third and Broadway for thirty years, has decided to retire from business, and has disposed of his store to the Treber Drug Company. Prof. Diehl will continue his connection with the Louisville College of Pharmacy.

Dr. T. J. Slaton, of Greenville, Ky., has recently sustained an injury to his ankle, as the result of a runaway caused by a broken bit.

Drs. J. M. Mathews and Bernard Asman have associated themselves for the practice of their specialty, and have removed their offices from the Warren Building to 551 Fourth avenue.

Dr. Asman has recently returned from Europe, where he has been associated with Mr. Allingham and others interested in proctology.

As a result of the decision by Judge Miller, of the Jefferson Circuit Court, the Hospital of the Kentucky School of Medicine must pay taxes, unless the decision is reversed by a higher court. It was the contention of the college authorities that the hospital should be exempt because of the large number of charity patients taken care of in the hospital annually.

The corner stone of the Jewish Hospital was laid with impressive ceremonies on the afternoon of December 13. It is located on the southwest corner of Floyd and Kentucky street, and will cost, when completed, exclusive of furnishings, $36,000. It will be a valuable addition to Louisville.

Drs. Blue and James have removed to the Norton Building, Fourth and Jefferson streets.

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Dr. Llewellyn P. Spears has returned from Vienna and other foreign cities. He will office with Dr. Ap Morgan Vance, 218 West Chestnut street.

At the annual meeting of the Jefferson County Medical Society, held December 15, 1903, the following officers were elected:

President—Dr. H. Horace Grant.

Vice President—Dr. Jos. Hobson, of the county.

Secretary—Dr. Henry Enos Tuley.

Treasurer—Dr. Sidney J. Meyers.

Delegates to the State Society:

Dr. William Bailey.

Dr. J. B. Marvin.

Dr. W. F. Boggess.

County Societies.

JEFFERSON COUNTY MEDICAL SOCIETY.

Stated Meeting, Tuesday, December 15, 1903, with Dr. William Bailey, President, in the Chair.

PRIMARY OVARIAN GESTATION.

Dr. Louis Frank: This ovary was removed after an abdominal section for acute peritonitis. While exploring one of the tubes the ovary was found enlarged and the tube very much thickened. The ovary was about the size of a hen's egg, and when it was opened a blood-clot about the size of a pigeon's egg was found. Dr. Weidner has examined the specimen and reports that the walls of the ovarian sac contain placental tissue in an early state of development. There was no pus present, but only a little muco-purulent fluid. The specimen will be sent to Johns Hopkins for examination. Largely on account of the opinions formerly held by Mr. Sutton, a recognized authority, we have hitherto looked upon ovarian pregnancy as a myth. However, from recent exhibited specimens which Sutton has examined, he now concedes the possibility of genuine ovarian pregnancies, and this has led us to make a routine practice of examining all cases of so-called "ovarian apoplexy," with a view to finding that chorionic or decidual structure, which latter is *prima facie* evidence of pregnancy.

DISCUSSION.

Dr. W. H. Wathen: All of these specimens are of great value in the determination of a condition not believed to be possible until very recently. Until a few years ago it was generally claimed that such a condition as ovarian pregnancy was impossible, or not proven. Sutton had reached this conclusion after examining many specimens, labeled ovarian pregnancy, in the museums, but he now recedes from the position. It is usually claimed that ovarian pregnancy could not be proven unless the fallopian tube be found open and not adherent to the ovary, but this theory is hardly tenable. Dr. Frank's specimen, from a macroscopical examination, indicates a chronic inflammation of the tube, resulting in peritonitis; it does not appear to be ovarian pregnancy, and only the microscopic examination can determine that. The presence of chorionic villi would be positive proof, and I await with general interest the result of the investigation at Johns Hopkins.

Dr. Frank (closing): It would be hard to determine what per cent. of cases of extra-uterine pregnancy are primary ovarian gestations. On account of the opinion which has prevailed, most of these cases have been dismissed as simple ovarian apoplexies, but we are now examining all such cases carefully. In this case there was a history of gonorrhea, which caused the peritonitis, and the operation was for the relief of this condition. No matter what the macroscopic appearance may be, the determination of placental tissue is absolute proof. I put great faith in Dr. Weidner's decision, but I do not want it to go unsupported, and so will send the specimen to Johns Hopkins.

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APPENDICITIS.

DR. J. HUNTER PEAK: One of these appendices is the largest and the other the smallest I have ever seen. One was the case of a lady on whom I did a trachelorrhaphy and perineorrhaphy in August. The following February she was referred to me with peritonitis and tenderness over the appendix. The peritoneum was very thick and vascular and the appendix easily found. It was removed and found to contain about two drops of pus. There was a miliary tubercular condition, with adhesions everywhere except about the tubes, uterus and ovaries. The uterus was large and she had missed two periods; seven months afterward she gave birth to a child. Repair of the cervix and peritoneum was not interfered with and she has since been in perfect health.

The other specimen is from a man of 21, who had suffered for three months with what was supposed to be appendicitis. He could not walk erect. The appendix was located with difficulty, the end of the cecum and the appendix being post-peritoneal and the appendix lying beneath the end of the cecum. Diagnosis had been difficult in his case on account of most pain being referred to his back. It was the longest appendix I ever saw and was diseased at one point. He has had no return of his trouble since. The man had never had any typhoid fever or any other inflammatory condition about the abdomen. The cecum and appendix being post-peritoneal must have been a congenital condition.

There was no family history of tuberculosis in the first case. She recovered from the first operation, but later on began to lose flesh and decline up to the time when the supposed appendicitis was discovered.

The essay by Dr. Sidney J. Meyers, entitled, "Practical Points in Dietetics," was then read. See page 291.

DISCUSSION.

DR. DUNNING WILSON: I would like to enter a plea for the teaching of dietetics in our schools. Most of our students leave the medical college in practical ignorance of this subject. It is the study of the individual, rather than the disease, that makes the true doctor, and there should be laboratories where the student is taught the composition of foods. A rheumatic diet which would be precluded in a person of gouty diathesis, for example, might be indicated for a case of tuberculosis.

DR. MEYERS (closing): In the treatment of diseases where we depend mainly upon diet, we sometimes neglect to think of the patient himself. We get into the habit of handing out our printed diet lists to all classes without paying any attention to the needs of that particular individual. I have nothing more to add.

REPORT OF CASE OF UNUSUAL HYPERMETROPIA.

DR. JOHN KNOX MORRIS: I merely want to mention an unusual case of hypermetropia, the highest amount I ever met with—seven diopters in a child about 7 years of age, with a convergent squint. Both eyes presented about the same condition, about a half diopter of astigmatism, with the rule, in the squinting eye, which was amblyopic from disuse. It is rather unusual to find hypermetropia to such an extreme degree, as I think most of the men doing eye work will agree.

OXYGEN IN TREATMENTOF TUBERCULOSIS.

DR. DUNNING WILSON: I would like to bring up a question which has arisen in my own mind, and ask for information. It concerns the efficacy of the administration of oxygen in tuberculosis. One physician told me that he considered it deleterious, and I would like to get the expression of others. I have been giving it twice a day to one case, and after taking it the temperature has been decreased from a fifth to $1\frac{1}{5}^{c}$. He had been complaining of pain in the left side, which had been called a pleu-

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rodynia. In giving him the oxygen, I instructed him to breathe slowly and deeply, and he said it gave him relief of this pain. This exhilaration must have been of some service, because it did not produce any more fever. He has been under that treatment for nearly three weeks, and temperature has never gone above 100 4-5°. Should the lungs be given absolute rest, or not?

DISCUSSION.

DR. T. HUNT STUCKY: In discussing the subject of tuberculosis we are always on dangerous ground. It has been my belief that in sending patients to a higher altitude, it was for the purpose of securing that which Dr. Wilson claims he has secured by the administration of oxygen. My experience with the majority of cases sent to higher altitudes to secure oxygen to stimulate lung gymnastics has not been borne out by the benefit obtained. If inhalations of oxygen twice daily will reduce temperature, does it necessarily follow that it is of permanent good, or is it simply a means of bracing the lungs to do better work by direct stimulation, ultimately exhausting their capacity?

I have been trying Sterne's streptococcic serum and have had reduction of temperature, cessation of cough and apparent gain in weight. Yet I confess that I doubt it all. Oxygen is a great tonic and a great lung gymnastic and blood builder, but we have all found in our experience with diseases of a destructive nature that we have temporarily good results, no matter what change we make in the treatment. I will hail with pleasure any method of treatment which will enable me to say with a degree of positiveness that there will be a marked benefit. I have had such results as mentioned from the use of the compound tincture of benzoin. It takes time to test the value of new measures.

DR. W. B. GOSSETT: Dr. Stucky, in speaking of the use of the anti-streptococcic serum, causes me to mention a case of consumption that came to my knowledge through my office partner, Dr. F. J. Kiefer. Dr. Kiefer for three weeks has been using the serum on a male patient of his in New Albany. In that time his patient has gained seventeen pounds, and is now out of bed and attending to his daily business. His night sweats have ceased. Dr. Kiefer has certainly gotten most excellent results in this case by the use of the anti-streptococcic serum.

DR. WILSON (closing): Of course, I do not mean to say that oxygen alone has been the cause of the improvement. I only wanted to know whether there is any risk in giving it. Are lung gymnastics the thing we want, or is absolute rest to be preferred?

TREATMENT OF LACHRYMAL OBSTRUCTION.

DR. J. M. RAY: There is nothing in eye-work that is more unsatisfactory than the usual treatment for lachrymal obstruction. The source of this obstruction may be anywhere in the drainage apparatus, and may be due to stricture of the lachrymal canal, inflammation in the lachrymal sac, hypertrophy of the turbinated, or misplaced puncta. The treatment varies according to the location of the obstruction. The so-called catarrhal cases are much benefitted by syringings and washings with antiseptics. But the most difficult cases, and most annoying to doctor and patient, are those arising from disease of the lachrymal sac, acute or chronic. The etiology is still in doubt, and it occurs secondary to obstruction in the canal below. A number of cases occur as the result of infection.

In cases of chronic distention of the lachrymal sac infection is most likely to occur, and unless emptied early, rupture occurs and the phlegmon opens on the outside and becomes a source of annoyance and disfigurement. It has been the experience of all that while we can enlarge the canal and get good passage for the tears, a fresh infection is likely to take place and another abscess results.

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Treatment by washings and probing in my hands has proven of little benefit, and three years ago, while abroad, I noticed they were treating these cases by extirpation of the sac. I saw very few probes passed through the canal. Previous to that time I thought extirpation rather a severe measure for an apparently simple ailment, but I have come to realize that pus in the lachrymal sac is not a trivial matter. In the last year I have seen three individuals who have lost the eye as the result of corneal wound in an eye with a tear overflow. In the case of working people, and particularly those in shops where they are likely to get abrasions of the cornea, there is grave danger when obstruction of the lachrymal sac is present. We always shun operations on the eye-ball in such cases.

I determined to adopt this method and have done two recently, with decided benefit. The operation is very simple and can be done under a local anesthetic, but a general anesthetic is better. I used nitrous oxide and ether. One patient had three attacks of phlegmonous inflammation within a year. She was also a victim of hay fever, and as soon as the hay fever season was over I removed the lachrymal sac, and this was followed by a subsidence of the conjunctivitis and a stoppage of the tear-overflow. She passed through the last hay fever season with very little conjunctivitis in that eye.

I operated on another case a few days ago and I have here a specimen of the lachrymal sac. This operation consists in making an incision below the internal paepebral ligament, dissecting down to the fascia and then by blunt dissection, separating everything except the canaliculi and lower end of the sac. The wound heals in a few days, and in some cases no stitches will be necessary at all. There is very little reaction, and relief is so decided that I believe it is an operation of value.

The obliteration of the drainage apparatus for the tears removes the source of irritation, but it is difficult to explain exactly how the benefit results. Experiments on dogs have shown that the lachrymal gland atrophies, and this lessens the flow of tears. This occasions no disturbance, as the mucous glands of the conjunctiva furnish enough moisture for the eye.

I suggest that in the case of recurring phlegmonous inflammations of the lachrymal sac, especially in artisans exposed to abrasions of the eye, extirpation of the sac is indicated.

DISCUSSION.

DR. JOHN KNOX MORRIS: It occurs to me that Dr. Ray did not lay enough stress upon the treatment of the nasal mucous membrane in these affections. He referred to hay fever in one case with the coincident acute exacerbations of the dacryocystitis, and we all know the intimate relationship between these two. A great deal of attention must be paid to the nasal mucous membrane. Pressure of the inferior turbinated bone may, of course, complicate the trouble, but over and above this the mucous membrane itself needs attention in addition to syringing the duct. I have seen one or two cases in nervous women where, for cosmetic reasons, operations would not be considered for a moment, relieved by temporizing in this way.

DR. S. G. DABNEY: This subject has been attracting much attention in the last few years. The recommendations of Dr. Ray are the same as advanced some years ago in an article by Dr. Knapp in Norris and Olivers' System of Diseases of the Eye. Dr. Morris' suggestions are good in many cases, but in the two classes to which Dr. Ray especially refers—chronic mucocele and recurring acute dacrocystitis—not much, I think, will be accomplished by treatment of the nasal mucous membrane. My experience has been that this thick, mucoid material is very hard to get rid of, though we can generally palliate it with argyrol. I have used it recently with excellent results, and I have thought I did more good in stop-

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ping this mucoid material than in checking the overflow of tears.

It occurs to me that the removal of the tear sac would be a wise preliminary in cataract operations. One of the most dangerous complications in wounds of the cornea is the infection from the tear-sac. It occurs to me also that in private practice under ordinary circumstances the proportion of cases who will submit to such an operation for the relief of an apparently simple ailment will never be very large. It is hard for people to appreciate remote dangers.

Book Reviews.

Atlas of the External Diseases of the Eye.

By Prof. Dr. O. Haab, of Zurich. Second edition, thoroughly revised. Edited, with additions, by G. E. De Schweinitz, A.M., M.D., Professor of Ophthalmology in the University of Pennsylvania. With 98 colored lithographic illustrations on 48 plates, and and 232 pages of text. Philadelphia, New York, London: W. B. Saunders & Co. 1903. Price, $3.00 net.

The latest of this series, being the second edition of this work, fully bears out the reputation gained by the others. The chromo-lithographs are most beautifully executed, and with the frequent editorial comments throughout the text, make a most valuable "clinical" book.

Surgery, Its Theory and Practice.

By William Johnson Walsham, F. R. C. S., Eng., M. B. and C. M. Aberd, Surgeon; Formerly Lecturer on Surgery and Anatomy, St. Bartholomew's Hospital, etc. Eighth edition by Walter George Spencer, M. S. S. B., F. R. C. S. Eng., Surgeon to the Westminster Hospital. Philadelphia: P. Blakiston's Son & Co. 1903.

We hardly believe this English work can compete with the many American text-books on Surgery—not because this one lacks merit, for we see much in it to commend, but because it does not possess a great deal of merit not to be found in our American surgery, and we believe American students and American professors are loyal to our own books.

Referring to the chapter on appendicitis, we are struck with the frequency of reference to our own surgeons upon its treatment. The author recommends operation. The illustrations showing the possible locations of the appendiceal abscess are very good. The searching for the appendix when pus has been found, exploring with the finger and washing out the abscess cavity is deprecated.

The book is a useful one, and we hope may have a wide circulation in spite of the opinion expressed above.

Compend of Gynecology.

By Wm. H. Wells, M.D., Chief of the Gynecological staff of the Mount Sinai Hospital, Philadelphia; Demonstrator of Clinical Obstetrics in the Jefferson Medical College, etc. Third revised and enlarged edition, with 145 illustrations. Philadelphia: P. Blakiston's Son & Co. 1903.

A feature of this book is its broadly including the methods of many instructors throughout the country, instead of, as is often the case, only stating one operation or method of treatment—that probably the author's preference.

The book has its place with the student and will continue its popularity undoubtedly.

The Etiology, Pathology, Diagnosis and Treatment of Tumors.

By A. Hamilton Levings, M.D., Milwaukee, Wis., Professor of the Principles and Practice of Surgery and Clinical Surgery in the Wisconsin College of Physicians and Surgeons, etc., etc. Profusely illustrated. Cleveland Press. Chicago.

As the title announces, this work considers tumors in all their detail, a feature of the book being the many and excellent illustrations throughout. This is especially true of the reproduced photomicrographs which are unusually well executed and printed.

The classification of growths has been a histologic one entirely.

The book represents four years' work on the part of the author, and but little can be said that is not commendatory. We would rather deprecate the stress laid on the fact that the text is a compilation of "lectures on tumors," which would imply rather a stenographic report of this series of lectures, without careful editing.

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The Cleveland Press, issuing medical works exclusively, is to be congratulated on the typographical excellence of the book. The binding is in half calf, cloth sides, standard octavo size.

Whitman's Orthopedic Surgery. New (2d) edition. A Treatise on Orthopedic Surgery.

By Royal Whitman, M.D., Instructor in Orthopedic Surgery in the College of Physicians and Surgeons (Columbia University), New York; Associate Surgeon to the Hospital for Ruptured and Crippled; Orthopedic Surgeon to the Hospital of St. John's Guild; Chief of the Orthopedic Department of the Vanderbilt Clinic, etc. New (2d) edition, thoroughly revised and much enlarged. In one octavo volume of 820 pages, with 507 engravings, mostly original. Cloth, $5.50 net. Lea Brothers & Co., Publishers. Philadelphia and New York.

Orthopedic surgery has deservedly received much attention in recent years, and the author of this work has been one of its most prominent specialists. He has written an excellent book, emphasizing the various subjects as their needs were presented clinically.

Tuberculous Disease of the Spine, being probably one of the most frequent of orthopedic troubles, is described in the first 112 pages, stress being put upon the methods of diagnosis and examination. The author advocates both the radical and symptomatic treatment of the abscesses complicating this trouble, according to its location and symptoms presented—rather advising the symptomatic treatment, as the "radical" treatment is unsatisfactory. The proper seats for school children as a prevention of spinal curvatures is emphasized.

An important chapter is that upon lateral curvature of the spine, giving, as it does in detail, the proper exercises for their correction.

We naturally look at once for the chapter upon the Lorenz Operation, which the author fully describes and illustrates in detail.

The book is entirely satisfactory, and will be found most useful by the student, for whom it was originally designed, the practitioner and orthopedic specialist.

Physicians' Visiting List (Lindsay & Blakiston's) for 1904. Philadelphia: P. Blakiston's Son & Co. 1904.

This visiting list is one of the most convenient we have seen. It can be had in the following styles: Regular edition for 25, 50, 75 or 100 patients per day or week; the perpetual edition the same as the foregoing, but without dates, for 1,300 or 2,600 names, and the monthly edition. The latter is decidedly the most practical; the name need be written but once during the month, the whole month's account being kept in one place. Each edition has a special memoranda pages, pencil and pocket.

Nose and Throat Work for the General Practitioner.

By George L. Richards, M.D., Fellow American Laryngological, Rhinological and Otological Society; Fellow American Otological Society; Associate Editor Annals of Otology, Laryngology and Rhinology; Otologist and Laryngologist Fall River Union Hospital, Fall River, Mass. Price, $2.00. Published by International Journal of Surgery Co., New York.

This book of 330 pages deals with the subject of nose and throat work from the standpoint of the general practitioner, into whose care come most of these cases in their incipiency. The author has described the treatment in such detail as to leave no point obscure, and to simplify the technics as much as possible, so far as to avoid the necessity for elaborate and expensive armamentarium.

It is well illustrated by original and carefully selected drawings.

Infectious Diseases. Their Etiology, Diagnosis and Treatment.

By G. H. Roger, Professor Extraordinary in the Faculty of Medicine of Paris, etc., translated by M. S. Gabriel, M.D., New York. In one octavo volume of 864 pages, with 43 illustrations. Cloth $5.75 net. Lea Brothers & Co. Philadelphia and New York: 1903.

Considering the opportunities for the study of infectious diseases by the author, personally attending 10,000 patients during five years, it is to be expected that he would prepare a most interesting and instructive book. He has considered the general character

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of pathogenic bacteria as related to both medical and surgical subjects, thus combining in one volume all that the student should know of the subject in both departments.

One of the most interesting chapters is the Evolution of Infectious Diseases, in which is considered Incubation, Termination, Crisis, Death, etc. Not the least important is that portion of the chapter devoted to Intraplacental Transmission of Infection, both acute and chronic. Congenital predisposition and immunity are also considered under this head.

Fully one-fourth of the book is taken up with Therapeutics of infectious diseases. We feel sure the book will be found most instructive and practical.

A Text-Book of the Practice of Medicine.

By James M. Anders, M.D., Ph.D.. LL.D., Professor of the Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Sixth Edition, Thoroughly Revised. Handsome octavo volume of 1300 pages, fully illustrated. Philadelphia, New York, London. W. B. Saunders & Co. 1903. Cloth, $5.50 net; Sheep or Half Morocco, $6.50 net.

This book has reached its sixth edition since 1897, It has been standard since its first publication. The general plan and classification have been followed in this edition, but a number of new subjects have been considered, among which may be mentioned the Mosquito-borne Diseases (Malaria, Yellow Fever), Bacillary Dysentery, Cholecystitis, Para-typhoid Fever, the Fourth Disease, Trypanosomiasis, Orthostatic Albuminuria, Adiposis Dolorosis and Amaurotic Family Idiocy.

The subject proper, which has been noticed in other edition, is frequent use of diagnostic tables, tried formula metric equivalents in doses; frequent use of temperature charts and excellent illustrations when needed.

Each subject is considered under the heads of Definitions, Etiology, Pathology, Diagnosis, Symptoms, Prognosis and Treatment. Differential Diagnosis is also considered wherever necessary. The book is one of the best to be had upon the subject of the Practice of Medicine.

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition.

By Dr. Carl von Noorden, Physician in Chief to the City Hospital, Frankfort, A. M. Authorized American edition. Translated under the direction of Boardman Reed, M.D., Philadelphia, Pa. New York: E. B. Treat & Co.

This is the fourth volume of this series and discusses the Acid Autointoxications. The translator is Dr. A. C. Croftan, who himself has done considerable good wook in this line of investigation.

It deals with the numerous forms of self-poisoning, emphasizes the gravity of the acid forms, etc., discusses the causes of diabetic coma, acetone, and a very full chapter on therapeutic considerations.

The Medical Record's Visiting List, or Physicians' Diary, for 1904. New York York: Wm. Wood & Co.

This very useful book contains much valuable information for ready reference—estimation of duration of pregnancy, equivalents of temperature, weight, etc., maximum adult doses, drops in fluid drachm, solutions, treatment of poisoning, and visiting list in its various sub-divisions.

A Text-Book of Pathology.

By Alfred Stengel, M.D., Professor of Clinical Medicine in the University of Pennsylvania. Octavo volume of 933 pages, with 394 text-illustrations, many in colors, and 7 full-page colored plates. Philadelphia, New York, London. W. B. Saunders & Co. 1903. Cloth, $5.00 net; Sheep or Half Morocco, $6.00 net.

The author states the developments in this field have been so great during the time which has elapsed since the last edition as to make it difficult to select those subjects which will prove lasting.

The addition in this volume of a chapter on the technic of pathologic investigations is commendable

Nearly every American student knows Stengel's Pathology, and it is certainly one of the best published.

Among the subjects revised are: Ehrlich's Theory of Immunity; Tuberculosis; Yellow Fever; Typhoid Fever; Dysentery and Diseases of the Blood.

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Nervous and Mental Diseases.

By Archibald Church, M.D., Professor of Nervous and Mental Diseases and Head of Neurological Department, Northwestern University Medical School; and Frederick Peterson, M.D., President New York State Commissioner in Lunacy; Chief of Clinic, Department of Nervous Diseases, College of Physicians and Surgeons, New York. Fourth edition, thoroughly revised and enlarged. Handsome octavo volume of 922 pages, with 338 illustrations. Philadelphia, New York, London: W. B. Saunders & Co. 1903. Cloth, $5.00 net; Sheep or half morocco, $6.00 net.

This book was primarily written as a text-book for students, and its revision for the fourth edition has been undertaken with their needs in view. The two departments are separate and distinct, though bound in one volume.

In this volume has been incorporated the new theories on the healing of nerves, intermittent limping, and herpes zoster; each has been thoroughly considered. In the Psychiatry department has been included a critical review of the German schools, this being written, under the direction of the author, by Dr. Adolph Meyer, of the New York State Hospitals.

A number of new illustrations have been added.

A Text-Book of Operative Surgery. Covering the Surgical Anatomy and Operative Technic Involved in the Operations of General Surgery. Written for Students and Practitioners.

By Warren Stone Bickham, Phar.M., M.D., Assistant Instructor in Operative Surgery, College of Physicians and Surgeons, New York: Late Visiting Surgeon to Charity Hospital, New Orleans, etc. Handsome octavo of 984 pages, with 559 illustrations, entirely original. Philadelphia, New York, London: W. B. Saunders & Co. 1903. Cloth, $6.00 net; Sheep or half morocco, $7.00 net.

With so many hours devoted to this subject in medical colleges, the necessity for a book of this nature is apparent. It goes into the detail of surgical technic as cannot be had by works upon general surgery. It abounds in splendid illustrations, emphasizing the anatomical side of the subject, as well as assisting in the description of the technic, localizing the course of incisions and relations of tissues, vessels, etc.

The incision is fully described in every operation, the following headings being used in each subject: Description of the Operation, Position, Landmarks, Incision, Operation, Comment.

The fine calendar paper, the excellent illustration and clear press work give the book a very handsome appearance.

American Text-Book of Surgery. For Practitioners and Students.

Edited by William W. Keen, M.D., LL.D., F.R.C.S. (Hon.), Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia; and J. William White, M.D., John Rhea Barton Professor of Surgery, University of Pennsylvania, Philadelphia. Fourth Edition, Thoroughly Revised and Greatly Enlarged. Handsome octavo of 1363 pages, with 551 text-illustrations and 39 full-page plates, many in colors. Philadelphia, New York, London. W. B. Saunders & Co. 1903. Cloth, $7.00 net: Sheep or Half Morocco, $8.00 net.

The mention of the names of the authors of this work, now in its fourth edition, is sufficient recommendation of its worth, viz.: Drs. Phineas S. Conner, Frederick S. Dennis, William W. Keen, Charles B. Nancrede, Roswell Park, Lewis Stephen Pilcher, Nicholas Senn, Francis J. Shepard, Lewis A. Stimson, J. Collins Warren, J. William White.

It is stated by the publishers that over 40,000 copies of the previous editions have been disposed of.

A book that is so well known needs but a mention of the changes in its most recent edition, instead of a detailed review. These are given as follows: Much of the old text and many of the old illustrations have been omitted; many new illustrations have been added; the following chapters have been rewritten: Surgical Bacteriology; Tumors; the Osseous System; Orthopedic Surgery; and Surgery of the Joints, Nerves, Head and Abdomen.

Six new chapters are added: Military, Naval, and Tropical Surgery; Examination of the Blood, Immunity, and the Pancreas.

It is a book which has made for itself, and will always keep, a place in the esteem of the American profession.

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Original Communications.

TUBERCULOSIS OF THE PERITONEUM.

BY LEWIS S. McMURTRY, A.M., M.D.,
Professor of Gynecology and Abdominal Surgery in the Hospital College of Medicine.
LOUISVILLE, KY.

In the serous surface of the peritoneum the tubercle bacillus finds a pabulum exceptionally suited for germination and diffusion. This form of tuberculosis varies in its manifestations. It may consist of a few nodules as is often seen upon the serous covering of the Fallopian tube; it may exhibit a tubercular diffusion over an extended neighborhood of peritoneum, or it may extend throughout the visceral and parietal peritoneum, appearing in nodules or as if the entire membrane had been peppered with little white and yellowish seeds.

In acute cases the peritoneum is red and thickened, with shreds of lymph scattered over the membrane, and presents the appearance of acute inflammation. There may be sacculated accumulations of pus. In sub-acute cases serous effusion of varying quantity may obtain. The intestines become matted by the inflammatory exudate, varying from the appearance of tender adhesions to general agglutination.

Serous effusion is very common, and may present as a general ascites, or in encysted collections isolated by omental and other visceral adhesions.

The mode of invasion is often—indeed most commonly—difficult to determine. Disseminated peritoneal tuberculosis may result from an infected mesenteric gland, or by extension through the intestinal coats of tuberculous intestinal ulcers. The frequency of the disease in women is doubtless due to the patulous fallopian tubes, the vagina, uterus, and tubes frequently affording loci of tubercular activity.

The predisposing causes of peritoneal tuberculosis are not apparent. Previously impaired health is exceptional, the majority of cases having no ill health prior to this particular illness. In many instances the disease is most insidious, and the patient requires no special treatment until they seek relief from the peritoneal effusion which remains as a sequel after the disease has practically become limited in its course.

Age may to a certain extent be regarded a predisposing factor. In 346 cases analyzed by Osler, the largest number (87) occurred between the age of 20 and 30 years; between 10 and 20 the next largest number (75) occurred; between 30 and 40 almost the same number (71) occurred. This form of tuberculosis is rare in the very young and very old—more frequent in the former. It is doubtful if race wields a marked influence in predisposition, the disease occurring both in the white and black races.

The symptoms of peritoneal tuberculosis are very variable. The disease may exist for a considerable period of time without producing any distinctive symptoms, or any symptoms whatever.

* Read before the Louisville Medico-Chirurgical Society, November 20, 1903. For discussion see page 347.

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The common forms usually show, besides loss of flesh and strength, local indications of the disease. The abdomen is swollen, hard and tender; and by careful palpation irregular masses may often be felt. Often the thickened and rolled over omentum, with adhesions, may be felt as a long sausage-shaped mass lying across the upper abdomen. In another class of cases there may be no local symptoms, only a gradual loss of health with evening rise of temperature and rapid pulse. In another class the disease may appear like an acute peritonitis or intestinal obstruction, with distension, vomiting, high temperature and rapid pulse. In women the disease often starts in the pelvis, and may first indicate its presence by pelvic pain, slight fever, and a mass posterior to or to one side of the uterus. Tuberculosis of the peritoneum is often associated with neoplasms and other diseases of the pelvic organs in women. In many instances the healthy appearance of the patient, the mild character of local symptoms, or their entire absence, render a diagnosis through ordinary diagnostic resources impossible.

The prognosis in peritoneal tuberculosis differs from that of tuberculosis of other vital organs. In a considerable proportion of these cases we have a slow, rather chronic, pathological process which may be localized in the peritoneum alone, and which does not send into the circulation a large amount of toxic material.

There can be no doubt that some persons affected with tubercular peritonitis recover spontaneously, without any treatment whatever. In the gynecological cases, where the pathological process originates in the tubes, uterus or ovaries, complete removal of the involved structures is usually followed by permanent cure. In another class of cases the disease persists and spreads throughout the entire peritoneum with encysted dropsical accumulations. These patients become chronic invalids, and in a good proportion of them, when the abdomen is opened and the fluid evacuated, permanent inhibition of the disease obtains. In another class the disease is from the beginning acute; invades progressively the general peritoneum, the peritoneal surfaces become adherent, no effusion obtains; there are fever, rapid pulse, emaciation and persistent progress to a fatal termination. In still another class of cases, less acute than the last, the disease seems to be stayed for a time, then resumes its activity, the effusion persists, after a time becomes purulent and terminates fatally. Oftentimes, however, the most hopeless cases apparently, if given the benefit of abdominal section, make surprising recoveries.

In 1881 Sir Spencer Wells called attention to the now generally accepted clinical fact that section of the abdomen in tuberculosis of the peritoneum will often arrest the progress of the disease and the health will be restored and permanently maintained. Sir Spencer operated upon a young girl with diffuse tuberculosis of the peritoneum and encysted dropsy, which he supposed before the operation to be an ovarian cystoma. The girl recovered and regained her health. Ten years later, in the last edition of his book, he states that this patient remains in good health. Similar observations were made by other surgeons, and soon it became a generally recognized clinical fact that a certain proportion of cases are cured by abdominal section. Medical literature now abounds with tabulated reports of cases.

It was soon apparent that the results of operation varied with the different grade and character of pathological manifestation. For example, it is generally conceded that operation in cases of tubercular peritonitis, with effusion (the so-called wet cases), is more effective in the arrest and inhibition of the pathological process than in the class of cases unaccompanied with effusion (the so-called dry cases).

In my own work I have had considerable experience with tubercular disease within the peritoneum. In a good-

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ly number of cases of effusion, where the disease was not diagnosticated prior to operation, I have been gratified in the apparent permanent cure of the patients. Some of these patients I have kept up with, and they are now in good health from six to ten years after operation. In a considerable proportion of apparently favorable cases there was no improvement after operation, the disease progressing to a fatal termination.

In cases of marked acuteness, characterized by high temperature and rapid pulse, both with and without effusion, it is my experience that operation fails to arrest the active progress of the disease. But the hopeless character of the disease under any other treatment, and the harmlessness of section under aseptic precautions, justifies resort to operation in all cases—especially if accompanied with effusion and diagnosis is not absolutely positive.

A careful examination of neoplasms of the uterus and its appendages, also of specimens of inflammatory disease of the Fallopian tubes and ovaries, convinced me long since that tubercular invasions of these structures through the Fallopian tubes and intestinal tract is much more common than is generally understood. A thorough removal of the invaded structures is usually followed by permanent cure.

It was formerly deemed important in the operative procedure—abdominal section for tubercular peritonitis—to separate adhesions after evacuating effused serum, and irrigate and drain the peritoneum. The injection into the peritoneum of antiseptic solutions and dusting the exposed membrane with iodoform were practiced by some. It is now generally conceded that the best results follow simple incision and evacuation of fluid, with no more manipulation and treatment than is necessary to accomplish this end. Intestinal and other visceral adhesions should not be disturbed, and both irrigation and drainage had best be omitted.

The modus operandi of abdominal section in the treatment of peritoneal tuberculosis is not known. Various explanations have been offered. Some have attributed the good results to admission of light and air; some to other influences. The clinical fact as yet has not been satisfactorily explained.

SOME CLINICAL OBSERVATIONS IN INTESTINAL SURGERY.*

BY AP MORGAN VANCE, M.D.,
LOUISVILLE, KY.

In this section of country we meet with more than the average number of intestinal injuries. This may be explained by the fact that the ubiquitous "forty-four" and the "festive Bowie" are a part of the apparel of the average man, and oftentimes that of the woman also.

A number of years ago I did considerable experimental work in this line. This was undertaken more to practice with the needle and thread than anything else. It proved very valuable to me in other ways; in determining to my satisfaction the best thread to use, the best needle, and the best kind of stitch; and, as practice makes perfect, I learned on the dog how better to handle the human intestine.

I once attended a meeting of a literary club where the subject for discussion was vivisection; the essayist, a doctor, was rather on the fence. As a guest, I was asked for my ideas. I asked the simple question, in case any of the gentlemen present should accidentally or otherwise get a perforating belly wound, which he would rather have do the repair work, one who had killed a hundred dogs learning how to sew guts, or one whose practice had only been on an occasional human? This was bringing it home so closely that the "anti" fellows were at once converted, and the discussion closed.

It is just as important for a surgeon to have learned to sew intestines as it

*Read before the Louisville Surgical Society, December 7, 1904. For discussion see page 354.

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is for a tailor to learn to make buttonholes, or a lady to have practice before she can do embroidery well.

I report the following cases with a conclusion or two:

Case I. Abdominal gunshot wound; one mesenteric and four intestinal perforations; operation; recovery. On February 7, 1893, I was called to see H. F., aged 29, who half an hour before had received a pistol-shot wound of the abdomen, the ball entering in a line with and five inches to the left of the umbilicus. The man was found where he had fallen after running two squares, with marked evidences of shock, face pallid, pulse barely perceptible at the wrist; temperature not taken.

A hypodermic injection of nitroglycerine, 1-100th of a grain was given, and the patient removed carefully and rapidly fully a mile to the infirmary, and, after as careful preparation as the circumstances of the case would allow, the cavity was opened in the median line between the umbilicus and pubes, no attention being given to the bullet wound. The ileum was brought out and carefully read, no more than six inches being exposed at a time during this process.

Four perforations—two of entrance and two of exit—were closed with fine catgut, as was also a large wound of the mesenteric border, which exposed the mucosa. Careful search was made for any other injuries, but none were discovered. The cavity was then thoroughly irrigated and cleansed of the extravasated blood and fecal matter, the wound being closed with silkworm gut, a glass drainage tube being carried well into the pelvis at the lower angle of the wound. The method of suturing was by the continued Lambert suture, which was rendered doubly secure by a resuturing with the same piece of catgut, the two ends being then tied together.

Ether was the anesthetic used, and the patient vomited large quantities of undigested food, this necessarily prolonged the operation, which lasted fifty minutes.

The drainage tube was removed at the end of forty-eight hours, it having been demonstrated, from the amount of bloody serum aspirated, that its use was a wise precaution.

At the end of three weeks the patient was up and walking about the ward in excellent condition, appetite and digestion normal, giving evidence of having lost very little of his strength. The bowels did not seem to have been disturbed in their function, castor oil having been administered at the end of fourteen days, evacuation each alternate day having been maintained prior to this by enemata.

The favorable outcome in this case was due to the fact that the bullet ranged transversely and evidently entered the abdominal wall on the opposite side at a point nearly corresponding to the point of entrance. This was not demonstrated, however, by its location. The direction of the bullet was changed by its having struck a trousers button in its passage through the clothing, thus being deflected from its primary course, which was directly backward.

Case II. Gunshot wound of stomach and duodenum; operation; recovery. Dr. G., aged 45 years, was shot in the abdomen by a drunken negro, October 30, 1898, with a 32-caliber Smith & Wesson revolver, the bullet entering 2½ inches above the umbilicus, and 1½ inches to the left of the median line, the pistol being only a few feet away at the time. The patient did not fall, but walked 100 feet into the house. He was immediately removed to the hospital and within forty minutes the abdomen was opened by an incision to the left of the median line, the bullet wound being at its center; the wound extended up to the ensiform cartilage and down to a point on a line with the umbilicus. A large wound in the anterior aspect of the stomach was discovered at once, and closed with fine catgut, interrupted Lembert sutures, and

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then a continued Lembert suture being used in addition. No wound of exit in the stomach could be found. There was a wound of the lower border of the duodenum three inches below the pylorus, the bullet evidently getting out of the stomach at the poloric opening, making the extensive wound of the intestine, the peritoneal covering of which was lost for quite an extent. This wound was closed with catgut, and a flap of the lesser omentum was sutured over in place of the lost serosa. The jejunum was much distended with blood and the bullet had evidently barked it in its passage, one point showing loss of peritoneum and slight bleeding. No other wounds were found. Irrigation with saline solution soon removed remaining clots, with some pieces of clothing which came from back of the liver.

The abdomen was closed with interrupted silkworm gut sutures, a glass as well as gauze drain having been introduced between the stomach and liver back to the posterior abdominal wall, the gauze being covered with rubber tissue. The glass tube was removed at the end of fourteen hours, the gauze after twenty.

On the fifteenth day the patient returned to his home without having taken a single dose of medicine after leaving the operating room, and at the end of four weeks he returned to his practice as well as ever.

Case III. Gunshot wound of stomach, liver, ileum and mesentery; operation; recovery. Just one week after the last case, I was called to Indiana to see a boy aged 13 years, who six hours before had received a wound of the abdomen, the bullet was a 22-caliber from a Flobert rifle loaded with a long cartridge. The gun was in his own hands, and he had been looking into the muzzle above his head; it was discharged just as he lowered it. The bullet entered the abdomen midway between the ensiform cartilage and the umbilicus, a little to the left of the median line. He immediately vomited the extensive breakfast he had just eaten, along with a great deal of blood. Six hours afterward I found him with great evidence of shock and loss of blood, pale, lips blue, pulse 130, hands and feet cold, large beads of perspiration on face and forehead.

The mother consented to an operation, though the desperate chances were fully explained. Without loss of time, with the cottage kitchen as an operating room, the abdomen was opened from the tip of the sternum to the umbilicus. As the peritoneum was opened fluid blood escaped in quantities, and the cavity seemed filled with clots. The history of his having vomited blood made me seek the stomach first. A large wound was found about the middle of the anterior wall, evidently the bullet having bitten out a piece, continuing on downward. This wound was closed with plain catgut. No other wound of the stomach could be found. There was a button-hole through the edge of the left lobe of the liver which was not bleeding. Reading of the ileum was then done, the blood clots being removed as we progressed. Hot water from a pitcher was constantly poured into the cavity, and also over the boy's body. About three feet above the cecum three wounds of entrance and three of exit were found and carefully sutured as they appeared. The wounds of the exit were large and ragged. Two wounds of the mesentery near the gut were also cared for. One of these had severed a large artery, which was bleeding actively and evidently had supplied most of the blood found in the cavity. The great omentum had three or four hematomas, produced by the small bullet having grazed or passed through its meshes.

By this time the boy was in pretty bad shape, and the abdominal wound was closed rapidly with a large gauze drain wrapped in rubber tissue inserted at the lower angle. The drain was removed at the end of twenty-four hours. After starving for three days this boy did well, and at the end of sixteen

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days had recovered, the only mishap being that the night after the stitches were removed he tore the wound open; being a rather unruly chap I think he undertook to scratch too vigorously.

I had no idea when I finished this work but that this boy would die promptly. The result in this case should encourage us to operate in almost any case that presents itself within a reasonable time after the injury.

This is my seventh operation and third recovery after extensive gunshot injuries of the stomach and intestines, the last three getting well.

The first patient had eight wounds of the ileum, living four days, the post-mortem showing that death occurred from a wound of the ureter.

The second patient had eight wounds of the ileum and one of the fundus of the bladder, living three days, dying of sepsis due to infiltration of urine from the wound of exit in the bladder, which was undiscovered and must have been near the neck, as an abscess appeared in Scarpa's space before death.

The third had four wonnds of the ileum, death at the end of thirty hours, the post-mortem proving death to have occurred from hemorrhage into the bowel.

The fourth occurred in the country, the operation was done under unfavorable conditions, as a forlorn hope, and the patient died of shock.

The experience of the writer proves that success is due to the early period in which the patient is seen after the receipt of the injury, and from the fact that the bullet fails to injure the extra-peritoneal and other abdominal viscera. After the patient has stood the necessary work to repair the intestines, additional exploration adds so greatly to the shock and to the time of the operation that a fatal outcome is almost certain.

The possibility of forestalling sepsis from the absorption of fecal matter is just in proportion to the time elapsing between the injury and the operation. This fact alone should admonish the surgeon to be always ready for such emergencies, that no time be lost. Another momentous factor in this connection is the necessity of the careful handling of the patient, that no unnecessary movement on his part shall increase fecal extravasation.

Case IV. Strangulated Femoral Hernia; Resection of Gut at End of Eleven Days; End to End Anastomosis; Wolf's Method Modified; Recovery. On January 30, 1893, I was called by her physician to see K. G., aged 33, domestic, who gave the following history:

Eleven days previously she was taken sick suddenly with vomiting followed by purging. Purging ceased early on the first day; the vomiting continued until seen by the writer.

It was evident that the extreme modesty of the patient had prevented the physician attending from discovering the cause of the trouble, which upon closer investigation proved to be a strangulated femoral hernia of the left side.

The patient gave evidence of extreme exhaustion, the pulse being 150; the temperature, according to the physician, subnormal. No history of the hernia antedating the present illness could be obtained, and the patient had never been seriously sick before, having suffered occasionally from "bilious attacks" of short duration.

Nitroglycerine 1-100 of a grain was administered hypodermically at once, and the patient removed in a rolling chair to the infirmary, only a short distance from her residence, and after slight preparation at 11:30 p.m. the operation for relief of her condition was begun.

Upon exposure and shaving of the pudendum the tumor was found to be about the size of a hen's egg. The sac was exposed and opened and about half an ounce of a very dark colored fluid evacuated, and the blackened intestine lifted out of the sac. The sac was much thicker than is ordinarily found in a recent hernia, so it is probable that the hernia had existed without the patient's knowledge.

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The very tight constriction was relieved, and after thorough irrigation with sterilized filtered water the intestine was carefully drawn out, when one large perforation discharging fecal matter was drawn into view, the intestine being sphacelus in the line of constriction, which included a large portion of the convexity, the mesenteric border not being involved.

This line of slough was fully four inches in length. Resection was immediately determined upon, and an end-to-end anastomosis decided to be the best suited to the condition. The assistants each making digital compression well on either side of the strangulated portion, nine inches were quickly removed with scissors, the incisions being extended between the vessels down into the mesentery, a silk ligature being applied and the whole removed. These incisions approached each other so nearly that the part controlled by the ligature was not more than an inch in width.

There was no hemorrhage, and the suturing was rapidly done as follows:

By a continued fine catgut suture the mesenteric borders were closely approximated; with the same size catgut, which was a No. 0, an interrupted suture was passed from the inside through the entire thickness of the intestinal wall, coming out at a corresponding point of the opposing gut to be approximated.

The part of the intestine above the constriction being greatly dilated, and that below being collapsed, made the approximation more difficult, but the result obtained was good.

The first stitch was taken through the mesenteric junctions. This method of suturing was continued on either side of this point just as far as could be accomplished from the inside, the remaining third of the circumference was carefully closed by interrupted Lembert sutures. To make the closure doubly sure, a continued Lembert suture was commenced on one side at the apex of the mesenteric angle, and continued from this point around the gut to a corresponding point on the other side. By this means there was no fresh surface left uncovered by peritoneum.

During the whole procedure the parts were frequently douched, and every care taken to prevent infection of the cavity.

With some little difficulty the sutured part was returned to the abdomen, the sac being removed high up, and deep approximation sutures applied to the canal. The wound was closed with silkworm gut, with a gauze drain in the lower angle.

The patient's condition at this time was better than when first seen, the pulse being 135 when the operation was commenced, falling to 120 before its completion. The operation was begun two hours after the patient was first seen, and there was certainly a very decided effect from the nitroglycerine, the operation occupying fifty-three minutes.

The fact that the patient had continued so long without nourishment rendered her chances of recovery much less, as an element of exhauston had to be considered and combatted. After rather a slow convalescence, however, she made a complete recovery, and is well to-day, never suffering with any sequelæ whatever.

In every case of emergency of this kind a rapid decision is necessary as to what is best, and this depends entirely upon the condition of the patient. To my mind only one of two procedures is legitimate; if the patient is in extremis and plainly unable to withstand a prolonged operation, the production of an artificial anus is the operation; but if, in the estimation of the operator, the condition justifies it, even to straining a point, the patient should have the benefit of the doubt, and a complete operation be performed as in this case.

Case V. Knife wound of intestine with wound of spleen; operation; recovery. On the morning of Easter Sunday, 1901, I was called by Dr.

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Henderson to the St. Joseph Infirmary to see a young man who had been "cut up." A young man 26 years of age, while down the line, had met some negroes, got into a fight, and had been wounded. He had five wounds, I think, on his person; one across the left side of his face, one severing the outer border of his hand, another penetrating through the pectoral and latissimus dorsi region, another in the arm, and the last in his left side between the tenth and eleventh ribs. The man was very much exsanguinated, in extreme shock, and there was a large mass of omentum protruding from this wound in the left side. He was anesthetized, and this wound was enlarged to the extent of four or five inches along the line of the ribs, the omentum was cleansed and replaced, and then there occurred active hemorrhage, the source of which could not be discovered. I first reached in and found the colon, but could not find that it was wounded at any point; I went a little further and drew out the ileum and found that the knife-blade had made a very extensive wound, practically severing it, and a wound of the mesentery from which hemorrhage was occurring. This was repaired, doing practically a resection, but the blood still came; by this time the man was nearly moribund, and I was convinced that the hemorrhage, which continued after suturing the intestine, came from the spleen. I then stuffed into this wound two yards of yard-wide gauze, packing it up toward the spleen, and put a large gauze drain in the direction of my intestinal work.

The man reacted promptly and made an uninterrupted recovery. At the end of forty-eight hours the immense piece of gauze was removed, and the wound brought together and closed. There were no septic manifestations.

I closed the resection with catgut, interrupted Lembert, then a continuous Lembert to brace it, with No. 1 chromicized gut.

In conclusion, I will say: The best suture material for all intestinal work is catgut. The needle to be used in sewing the intestine is an ordinary round needle, a milliner's or hatter's needle to be preferred. The best stitch is the Lembert or some modification of this form of suture.

Success will be in proportion to the early time after the receipt of the injury in which we begin our effort at repair, and the rapidity with which we do the work, with minimum amount of insult to cavity contents.

The catgut is absorbed and out of the way sufficiently early to prevent its acting as bridge-work for organized lymph which tends to narrow the lumen of the canal. This unquestionably does occur when silk is used, as proven to the writer on more occasions than one in his experimental work.

If a man has qualified himself to do rapid needle work by practicing on dogs he can do just as perfect and rapid anastomosis end-to-end or otherwise as can be done by any of the mechanical aids without their uncertainty and danger.

Efficient drainage is a desideratum in all cases of intestinal injury where it is even suspected that fecal matter has soiled the cavity.

My advice to aspiring intestinal surgeons is to spend less time tinkering with the different mechanical contrivances, forceps, buttons, etc., and more time in practicing on dogs to acquire the skill and dexterity necessary in the use of the needle and thread in intestinal work.

CARCINOMA AND SARCOMA OF THE BOWEL.*

BY J. GARLAND SHERRILL, A.M., M.D.,
LOUISVILLE, KY.

These conditions occur with more frequency than we are led to believe. According to Hemmeter 5,796 carcinomata were found in 69,083 autopsies; of these, 1,296 (22.35 per cent.) involved the intestine.

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*Read before the Louisville Academy of Medicine, January 6, 1904. For discussion see page 361.

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According to DeBovis it occurs once in every 2,500 cases of illness and averages one to every 300 deaths in hospitals. According to Nothnagel sarcoma of the intestine occurs once in 250 cases of that disease. Sarcoma of the small intestine is, therefore, very rare, but more frequent than of large gut. Libman records 59 cases of sarcoma of the small bowel and Jopson and White 22 cases involving the large intestine. The appendix is also affected by these diseases. Elting has collected 40 cases of primary carcinoma of the appendix, while Gifford mentions one case of sarcoma. Men are more often attacked by intestinal carcinoma than women.

Age.—Carcinoma occurs most often from 40 to 60 years, 11 years being the youngest recorded. The ages of the sarcoma cases range from 2 to 66 years.

The variety of carcinoma most frequently met is the adeno-carcinoma, while the spheroidal-celled type, either scirrhus or medullarys is sometimes seen. Colloid change occurs in some cases.

The sarcomata assume the round-celled type most often.

The adeno-carcinomata rarely cause circular occlusion of the intestine, but this is the usual termination in scirrhus. Any form of malignant disease by infiltrating and matting the intestines together may give rise to interference with the fecal flow.

Not infrequently does inflammation attack the tissues around a malignant growth; this is especially true in cases where ulceration has begun. This was a prominent feature in my first case, and from the number of reported cases simulating appendicitis, I conclude that it has occurred in those as well. From the reports it would appear that carcinoma of the intestine, contrary to its usual history, is infrequently accompanied by glandular involvement. The specimen of lymph node presented here, I think, bears out the statement that the glands are frequently hyperplastic, perhaps inflamed, but infrequently carcinomatous. The metastasis from carcinoma of the gut seems to occur through the blood, and the liver suffers most frequently from secondary deposits. Sarcoma, on the other hand, according to Jopson and White, in 68.4 per cent. of the cases shows secondary involvement of the mesenteric glands.

Tuberculosis is noted as a complication of cancer in a few cases. Invagination is a very frequent accompaniment of these growths in at least 10 per cent. of the reported cases. The cause of these growths is as little understood as is that of cancer in any locality, and it is beyond the scope of this article to enter extensively into the discussion of the various theories offered to account for the abnormal cell growth which results in the production of these neoplasms. Among the various theories may be mentioned those of Cohnheim, of Ribbert—and the many other explanations based upon histogenesis. The questions of heredity, traumatism and irritation have been well expounded. The trend of recent opinion has been toward the parasitic explanation. The experiments of Gaylord, Schiller and others leading to that view, while the researches of the Harvard Cancer Commission seem to disprove the claims that a parasite is the causative agent. The usual point of origin of these growths cannot be established from the present literature upon this subject. A frequent site is the follicles of Lieberkuhn. Undoubtedly the primary carcinomatous growths must spring from the mucous membrane or its glands, and this view is borne out by the reported cases of carcinoma of the appendix, where the disease has been detected at its inception.

The point of origin in sarcomatous tumors is rather difficult to locate on account of the size of the tumor and the involvement of the bowel, when the subject presents itself either to the operator or to the pathologist, but it is probable that the mucosa is the starting point of these tumors. The symptoms

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of either form of cancer affecting the intestine are very obscure, especially in the earlier stages, when more benefit might accrue from interference, and at times they are entirely wanting. There may be present early in the progress of the disease some irregularity of the bowels, but, as a rule, of not sufficient moment to demand attention. After a time uneasiness, discomfort or actual pain in the abdomen develops; owing to the gaseous accumulation this pain is often colicy in character; it is generalized to the whole abdomen at first, later it may become localized over the seat of the lesion, and is often increased by motion; although present in the majority of cases, the discase may exist for a long time before any appreciable pain is noticed. As the disease progresses tenderness will accompany the pain; if invagination develops as a result of the tumor, as it does in some cases (about 10 per cent.), the pain will become acute and symptoms of acute obstruction will appear. Loss of flesh and strength is marked and progressive, and greatly out of proportion to the discomfort of the patient, even when the appetite is good and the digestion appears to be normal. Any derangement of the digestion tends to accentuate the loss of strength; nausea and vomiting may occur, especially if any tendency of constriction of the intestine; alternating constipation and diarrhea are often observed, being probably due to constriction of the gut, with impaction which after a time excites diarrhea.

When ulceration takes place the diarrhea may become continuous and may prove very intractable, even exhausting the patient so that death results. Hemorrhage from the intestine occurs infrequently; in fact, less often than we would naturally expect; it is most often seen in rectal cancers. Many cases give a clinical history resembling recurrent appendicitis, especially when involving the ileocecal coil; attacks of pain lasting a few days or weeks, with tenderness, nausea, perhaps vomiting, tumefaction in some cases, and a slight elevation of temperature with relief by treatment, followed by recurrence after a few weeks or months, are quite likely to be diagnosed as appendicitis.

My first case presented just such a history, and other writers have mentioned this resemblance.

In Cumston and Vanderveer's collection 8 cases simulated appendicitis, those of Caird, Mayo, (2) Bernays, Lockwood, Delaunay, Pilcher and Vanderveer. Libman reports 5 cases of sarcoma giving such symptoms. The most constant symptoms of the disease are tumor, which is presented in every case which lasts for any length of time, and a cachexia which gives the skin a peculiar yellowish cast; anemia soon becomes marked, and the patient more and more debilitated until he dies of exhaustion, unless obstruction occurs and makes a rapid end of the case.

The first symptom of the disease, however, may be an intestinal obstruction in a supposedly healthy man, as the usual symptoms may be wanting. The duration of the disease is very uncertain, death has occurred in ten days after the first symptoms were noted, while some cases have had symptoms for ten years. The prognosis is very grave. Unfortunately, treatment is usually applied so late that the results are not flattering. An early diagnosis and operation will give these unfortunate patients the best chance. The diagnosis, owing to the vague symptoms, must be made largely by exclusion. Pain, tenderness, irregular diarrhea and constipation, dyspeptic symptoms, rapid loss of flesh and strength, anemia, cachexia, with an abdominal tumor will usually make a diagnosis.

Failing the usual means of reaching a conclusion, exploration is clearly indicated. The treatment is to be determined largely by the extent of the involvement. Resection of the intestine offers the only hope of a permanent cure, and this chance, though slight, should be given the patient whenever

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possible. Any of the classic methods may be employed. When this is not possible, a fecal fistula may be established to relieve obstruction, or to remove irritation from the passage of feces over the diseased tissue. In some cases short circuiting of the diseased intestine by an anastomosis may be practiced.

When growth is too extensive to permit operation, palliation is practically all that is left, as visceral cancer has not responded to the Coley fluid or to the X-ray.

SOME POINTS IN THE SURGERY OF ACUTE MASTOIDITIS.*

BY J. MORRISON RAY,
LOUISVILLE, KY.

To many members of this Society it may appear that I am dealing with a subject that has become threadbare, having been presented them in one phase or another on several previous occasions. But I assure you that to those who are called upon to treat ear diseases and to the general surgeon there can be no more important topic than a discussion on the proper management of the complications that occur in the mastoid in suppurative middle ear diseases, and the sooner all of us become fully aware of the possibilities of not only saving life, but of preventing future annoying disabilities, the more considerate will be of those who excite such discussions.

The importance of the early recognition and prompt relief by appropriate treatment is, I believe, fully appreciated by all of you, yet tentative measures are still too often depended upon to relieve a condition that menaces life.

The conservatism of Wilde and his pupils for a long time influenced the progress of the surgery of mastoidal complications of suppurative middle ear diseases. Not until the masterly work of Schwartze on the diagnosis and operative treatment of these cases appeared did the otological world seem to grasp the subject in all its possibilities. There is still prevalent in the minds of many surgeons ideas obtained from the early text-books of otology, and an operation which calls for an opening up of the mastoid cells is looked upon with fear, and is not resorted to until all other measures have failed. Hence, the classic Wilde's incision is still too often thought all that is necessary in dealing with the postaural results of pus in the middle ear.

The early writers seemed to be able to clearly differentiate between disease of the cell spaces within the mastoid apophysis and inflammation of its periosteal covering, and a simple incision down to the bone was deemed to be all that was necessary.

Von Troeltsch soon recognized the often failure of the simple incision in relieving the condition in childhood. He says, "after such an incision and evacuating of the superiosteal abscess, the bone may be found roughened or softened, the best course, then, is to remove the diseased spot and enlarge the fistulous tract which usually connects with the antrum mastoidea."

Not until more recent years do we find writers on the subject of mastoid disease claiming that the periosteal incision is insufficient in a majority of cases, whether the disease follows either an acute or a chronic middle ear disease.

In 1892 Blake remarked "that the efficacy of Wilde's incision was purely antiphlogistic, and should, in many cases, be the first step in a mastoid operation."

Dench, in the 1894 edition of his text-book on the ear, says: "In all cases where the Wilde's incision is positively demanded it will probably be necessary to enter the mastoid at a later period. In adults it should be a cardinal rule never to depend upon an operative measure of dividing the soft parts alone. In childhood only is it admissible."

In the latest edition of his work,

* Read before the Louisville Medico-Chirurgical Society, December 18, 1903. For discussion see page 358.

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Politzer says, "at the present, the author employs Wilde's incision only in primary periostitis of the mastoid process, less frequently in the past few years when painful swelling appears over the mastoid process during the course of an acute middle ear suppuration."

He further says, "The prognosis is materially influenced by early therapeutic measures. The shorter the duration the more limited its extent. If not checked by operation, the destruction will go on until a large portion of the cells is destroyed, and the danger of extension to vital organs is imminent."

While a majority of those engaged in aural surgery are aware of the failures of a simple periosteal incision, a great many cases of suppurative middle ear disease are seen by the family practitioner, and many are operated upon by general surgeons, who are not aware of the lack of thoroughness in this operation.

The difficulties that have seemed to appear to many in dealing with pus under the periosteum as a complication of suppurative disease of the middle ear, is that they fail to differentiate between mastoid complications occurring as a result of an acute otitis, and when it occurs as an acute exacerbation of a chronic suppuration. Again, the anatomical differences in the mastoid in the young child and in the adult are also overlooked.

The squamo mastoid fissure presents an easy avenue of escape for pus from the comparatively large antrum usually present in infancy and early life. Therefore, it is to be expected in children with suppurative diseases of the middle ear for pus to pass through this defect in the line of union of the squama and mastoid and quickly collect as a subperiosteal abscess. In fact, this can occur without the antrum becoming involved in the suppurative process. It must be borne in mind, however, that when this fissure exists the pus has almost as unhindered a course into the cranial cavity, and in a majority of cases where pus has found a sub-periosteal exit through this fissure a subdural accumulation will also be found, and for this reason, if no other, any operation that does not open the communication with the middle ear and give free exit to the pus is not the proper surgery.

A practice often resorted to by many in acute otitis media is the prolonged use of hot applications. In my experience this has often been productive of an external otitis, which either masks the true condition in the mastoid or gives rise to symptoms that lead to an operation in cases where no interference is necessary.

Many who at one time used the cold coil and local antiphlogistic measures, leeches, etc., now claim that such measures should be abandoned in a few hours if the pain and fever do not rapidly abate.

The question when the mastoid involvement in acute suppuration of the middle ear demands surgical interference is one of great moment in aural practice.

It is the observation of Bezold and others that in recent years acute suppurations have led more frequently to mastoid operations than chronic suppurations. The former says that in from one-fifth to one-fourth of all his cases of acute suppuration the mastoid and antrum were opened.

In a large majority of cases of acute suppuration in children where an early free incision is made in the upper back wall of the canal, a so-called internal Wilde, the middle ear is drained, the antrum relieved of pus contained therein under pressure, and thus the probabilities of the pus burrowing through the squamo mastoid fissure under the periosteum very much lessened.

While admitting that a certain number of cases of mastoid periosteal abscess, both in the child and in the adult, will heal after an evacuation of the pus, I am convinced that the operation has no influence on the suppurating focus

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in the middle ear, and if nothing further is done, and the skin incision heals, that a chronic suppuration is established in practically every case, and later grave complications may follow. While if the mastoid is opened and the middle ear drained the suppuration is checked and the ear returns to nearly the normal condition. The fact cannot be too strongly emphasized that the antrum is involved in every case of acute suppuration of the middle ear. Indeed, the post-mortem investigations of Politzer have shown that in every acute middle ear suppuration pus is found in the cells of the mastoid process, but so long as the connection with the middle ear remains patent the subsidence of the disease can be expected.

Uncomfortable experience has taught me that the incomplete operation, while possibly temporarily relieving the pain by evacuating the pus confined under the periosteum, does nothing more, and sooner or later other means more radical must be resorted to, not only to control the disease process, but to prevent further extension.

The following cases are examples of the failure of insufficient surgery to relieve the condition present:

Miss W. I saw in March, suffering from fever, pain and swelling over the mastoid, occurring in the second week of an acute suppurative middle ear disease. The indications for operation were apparent. I opened the mastoid and found the cell spaces filled with pus and granulation tissue. I carefully cleansed out the cavity and opened a communication with the middle ear. All the symptoms rapidly subsided. In three weeks she returned home with the wound healed, and the ear in apparently a normal condition. This remained in good condition until November, when, following as exposure, pain returned in the mastoid scar and in a few days a swelling appeared. She returned to me. I found the drum head intact and the middle ear apparently normal, hearing good. The swelling over the mastoid contained pus. An incision evacuated the fluid and a sinus was found leading upward toward the base of the mastoid into the so-called zygomatic cells, and on following up this tract the cells above the mastoid antrum leading deeply in over the tympanic attic were found to be the source of the infection. In my first operation I had failed to clean out these cells and pus organisms had remained here inactive for eight months. And on exposure a relapse of the suppuration had appeared, thus showing the incompleteness of the first operation. If a relapse will occur in such cases where apparently all the diseased cells were cleaned out, how much greater must be the tendency to a recurrence when only the sub-periosteal pus is evacuated or a fistulous tract through the mastoid curetted.

Case II. Child, age 6. The following history was obtained. When 2 years of age he suffered from scarlet fever, which was complicated by an attack of earache. The next winter he suffered from a relapse of the earache. This was followed by a swelling behind the ear. He was taken to an ear specialist and an incision was made into the swelling behind the ear and a large quantity of pus evacuated. The wound was packed with gauze; after a few weeks only a small sinus marked the site of the wound. This has never completely healed. The ear and the fistula over the mastoid constantly discharge pus. He was brought to my clinic because recently the ear had troubled him. It was discharging pus and the family had noticed something wrong with the face on that side. When I examined him there was facial paralysis on the left side. A small sinus with pus escaping and filled with a mass of granulation tissue was present over the mastoid. The skin around this was swollen and very tender on pressure. The auditory canal contained a large polypoid mass. He was sent to the Children's Free Hospital, and the following day an operation was made. The entire mastoid prominence was

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composed of granulation tissue and softened bone. The lateral sinus was exposed and granulation tissue removed from its wall. The middle ear was opened and the polypi removed. The wound was packed with gauze and rapidly dermatized. In three months the cavity behind was perfectly dry, and the ear discharge had ceased. The facial paralysis remained as a permanent disfigurement.

Case III. A man, age 56. He had an earache, followed by a purulent discharge with pain continuing for several weeks. A sub-periosteal abscess developed. His family physician opened this with relief to pain, the opening was allowed to fill with granulation tissue and became obstructed, the pain returned. After a few days he passed into coma. When I saw him he had all the evidences of an acute diffuse meningitis, and died in twenty-four hours.

Case IV. September, 1898, I saw a child, age 11, with this history: The child was always delicate, the mother having died of tuberculosis in a few months after the birth of the child. When 10 years old she suffered from a suppurating disease of the left middle ear. This was followed by a periosteal abscess over the mastoid, which was opened by the family physician and pus evacuated. The local inflammation subsided, but the ear has discharged pus ever since. A few weeks before I saw her she suffered from an attack of earache, this was accompanied by fever and tenderness behind the ear. One week before she was brought to me she became semi-comatose, and was in this condition when I saw her. Examination showed the middle ear blocked by a large polypus, the mastoid presented a scar from the former operation. Some evidence of pain was elicited on pressure over the mastoid. The pulse was slow, the temperature subnormal. The pupils were semi-dilated and ophthalmoscopic examination showed choked discs and retinal hemorrhages in both eyes. I operated the same day. After making the skin incision I found the entire prominence broken down and the space filled by a large cholesteatomata. On removing this the cranial cavity was found opened and the dura ulcerated, an opening as large as a silver quarter being present. The brain tissue was necrotic and several masses came away by gentle scraping. No abscess cavity could be found. The large cavity left was packed with gauze. The child improved for several weeks and regained consciousness, but the brain tissue came away in large necrotic masses. The external rectus muscle became paralyzed and the child died in coma sixty-three days after the operation.

This case was unquestionably tubercular, corresponding in its clinical course with cases reported by Macewen, who remarks "that in tubercular disease affecting the brain by extension from the mastoid, there is usually a tendency for the disease to become localized, and that destructive ulceration of brain tissue, and not abscess, is the most usual condition found."

I believe that had a thorough operation been done at the time the Wilde incision was made, and the middle ear thoroughly drained, the fatal consequence might have been averted.

While apparently good results have been known to follow simple incision down to the bone, such cases, if carefully watched, will require later a more thorough operation. And thus the patient is endangered by a second operation and the necessity of a second anesthesia, which, had the primary operation been properly carried out, would have been unnecessary.

These cases are not all I have seen illustrating the evils of an incomplete operation, but they are enough to prove the assertion that nowhere in surgery are the evils of incomplete work more apparent than when we come to deal with pus in the tissues behind the ear, occurring as a sequence to otitis media.

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IMPRESSIONS FROM EUROPEAN DERMATOLOGICAL CLINICS.

BY M. L. RAVITCH, M.A., M.D.
LOUISVILLE, KY.

Both at home and abroad much good work has been done within the last few years in the domain of skin diseases. At home, Fox, Jackson, Stellwagon, Bulkley, Hardaway, Hyde being the most notable workers; abroad, Broque, Lassar, Unna, Mracek, Crocker, T. Fox, Pernet, Morris. To an American student who has received any scientific training in skin diseases, New York offers an excellent place for study. At the Vanderbilt's clinics, with Fox, Jackson, Dade on the staff, and at the New York Skin and Cancer Hospital, with Bulkley and other well-known dermatologists, there is quite a good field for studying dermatology.

Abroad, the American student will do better in England. Though the clinics of Lassar, Broque, Jacobi, etc., offer more scientific training, yet an American student will be received more cordially and given a more practical knowledge in dermatology by our English cousins. The Chesterfield lectures, given by the best English dermatologists, are very interesting and instructive. They are free to any foreign physician. The hospitals devoted to dermatology (and there are nearly a dozen in London alone) offer an excellent field for study.

In this paper I will give a few impressions from European dermatological clinics, particularly from the London skin hospitals.

Pernet, of University Hospital College, had three cases of an acute bullous eruption developing in persons whose occupation has brought them into connection with recently killed animals. In these three cases there was a septic wound or whitlow, and this acted as a starting point of the disease. In one case particularly a butcher, aet. 26, there was a septic wound on the left middle finger, with a circinate scaly patch on the back of the left forearm. This latter was treated with pure formalin and dressed with white precipitate ointment. A slight dermatitis ensued on the treatment of the scaly patch, which extended gradually over the body, leading to a general erythema with a bullous eruption, the blebs being small. The patient ultimately recovered. Pernet believes that the eruption was not due to formalin, but was in direct association with the septic wound of the finger.

In dealing with eruptions produced by drugs, Pernet remarked that in attempting to arrive at the etiology, one does well to pass in review the various functions and habits of the individuals in the hope of obtaining a clue. For instance, disease of the liver may be a factor in the development of a skin disease, as may also cardiac disease and renal inadequacy. The nervous system is also of importance, though too much stress may have been laid upon it in the past. It is interesting to note the connection that the nervous system has with the skin, as shown by arsenic poisoning, pigmentation and keratosis with neuritis, etc. But when it is remembered that both are of epiblastic origin, light is at once thrown upon this connection. Susceptibility to certain drugs may be congenital or hereditary. Sudden diarrhea, associated with a drug rash, should not be arrested prematurely, for it may be an attempt of the body to eliminate the drug.

Dr. Eddows, of St. John's Skin Hospital, had two cases of acute pemphigus in infants, and discussed the bacteriological etiology. In the culture from one of these cases, and in another previous case, he has found streptococci. In the second case no culture was made, but it was a very general case, and microscopic sections showed large masses of cocci which stained well by Gram's method. Pemphigus neonatorum is now accepted as an impetiginous condition, and Eddows asks whether those of acute pemphigus

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in infants may not be due to the same organism.

Eddows claims that intolerable pruritus is sometimes associated with alkalinity of the urine. He reported such a case and treated the same successfully with mineral acids. In two other cases he has met with the same, one of general pruritus and the other of pruritus vulvæ. The acid treatment was successful in both cases.

A case of purpura hemorrhagica was described by Startin, his theory being that slighter cases are due to a vosomotor disturbance leading to dilatation, stasis and rupture in the smaller vessels. In fatal cases endarteritic changes have been found. Relapses are frequent and the prognosis should be guarded.

Speaking about purpura hemorrhagica, a case of Jacobson, of Germany, is remarkable. The patient was a woman aged 37; she appeared to have appendicitis, but at the operation only interstitial hemorrhages in the vermiform appendix were found, subsequently purpura and hemorrhages from the respiratory tract occurred. There were no arthritic or gastro-intestinal symptoms and no family or personal history of hemorrhagic disease. Suprarenal extract had a markedly beneficial effect.

In the opinion of Malcolm Morris, the X-rays are not bactericidal, but they stimulate the growth of bacteria, so that the good results obtained are not due to the action on bacteria. They may be due to the corrosive action of minute platinum particles, to ozone generation (Tesla) electric waves given off from the tube (Schiff), or retarded osmosis. In lupus the secondary conditions, e. g., ulceration, discharge, edema, etc., are relieved at once, but in respect of the eradication of disease, progress is disappointingly slow and failure is not infrequent. They proved of no use in one case of ulceration of the palate. It is the epidermic cells, more especially in the hair follicles, which react so readily to strong stimulation, not the underlying connective tissue. Deep ulcerated cases offer less risk of dermatitis. In carcinoma the X-rays relieve pain and may destroy secondary nodules as they appear. Inflammatory reactions are harmful, and the exposures should be weak, especially in acute inflammatory conditions. In keloid they diminish the growth and ease pain. He claims he has had good results in acne rosasis, eczema, psoriasis, hypertrichosis, sycosis, ringworm, favus and mycosis fungoides. In lupus, though a useful addition, the rays are much inferior to the light in curative efficacy.

At the Middlesex Hospital a patient with verrucose lupus of the hand was treated with radium, and much improvement followed. The application was made three times a week for from 10 to 15 minutes a sitting. After ten applications the improvement was remarkable; the verrucose elevations had disappeared, leaving a smooth cicatrix of healthy aspect. There seems to be a great future for radium in dermatotherapy.

Speaking about radium, it is almost impossible to obtain it. The prices are perfectly absurd. For 1-10 of a grain you will have to pay over $700, and it is doubtful if you could get it at that price.

Yesterday I had the fortune to attend a lecture, given at the London Institution, by Sir W. Ramsey, the most eminent English scientist. New ideas were advanced in regard to the mysterious metal-radium. The lecturer claimed that radium gives off a heavy gas, which slowly changes into helium, and then vanishes.

Radium is a metal, an element, which is extracted from a mineral known as pitch-blende, and is remarkable in that it gives off light and heat without wasting or without being consumed. Helium is a very rare gas, which exists in the sun, and which has only recently been obtained and isolated. It is totally different from radium in form and nature—as different as is gold from iron.

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Hitherto chemistry has been based on the theory that the elements are constant, and that one cannot change into another. But now it is seen that radium of its own accord and without external interference turns into a totally different element.

It has been known for some months that radium appeared to be giving off helium. But now Sir W. Ramsay has definitely stated that he has observed and examined the process. His discovery is of commanding importance to science, and may revolutionize all the old ideas about chemistry.

The gas given off by radium does at first show the spectrum of helium. Its spectrum is unlike that of any element yet known. It, therefore, appears to be some new form of matter, and by its process of change from one element to another it may supply the key to many mysteries in science.

London, November 27, 1903.

Society Proceedings.

[Reported by E. A. Forbes.]

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Friday, October 23, 1903.

REPORT OF CASES.

DR. JOHN G. CECIL: I have just left a puzzling case. Doubtless many of you heard the interesting paper of Dr. Bloom, at the Jefferson County Medical Society, on Syphilis. This being fresh in mind suggests this report. Several days ago a man about 40 years of age came to consult me about severe pain along the course of both sciatic nerves. His walk was rather uncertain, and the attack had come on him suddenly. He gave a history of having syphilis, and was then under treatment for chronic syphilis by Dr. Dercum, of Philadelphia. He had shown no symptoms of syphilis, except in the nervous system, for quite a while, but was very apprehensive on account of the possibility of locomotor ataxia. Dr. Dercum had assured him there was no great danger of ataxia, but had kept him intermittingly on inunctions of mercury. He gave such an account of this pain that I was uncertain whether it had any relation to his supposed nerve syphilis, but was inclined to attribute it to exposure. I treated him accordingly, but practically without effect. I gave strong doses of salicylate of soda and advised massage; he was also trying the hot air treatment. None of these measures seemed to be of benefit. Two or three days ago I was called to see him at his home early in the morning. He had gotten up and gone to the closet, and had fallen. He had been assisted back to bed, but could give but little account of what had happened. There was numbness over the backs of both hands and arms, with almost complete aphasia, and was very much disturbed mentally. I assured him there was no particular danger, and he fully comprehended what I said. I put him to bed, gave him bromide and chloral, and by evening of the same day he was practically restored, though the pain in the legs had not abated. The pain was the same as seen in ordinary sciatica.

During this attack he suffered with severe intermitting pain in the back part of his head in the cerebellar region, running down on his neck. This passed away and for a couple of days he was as well as ever. To-day he went down town and about 11 o'clock was seized with dizziness, was taken home in a carriage and became partially unconscious. I was summoned and found him in bed, restless, and suffering a great deal from pain in the same region of the head. He was evidently much benumbed about the hands and arms, though there was apparently no loss of motion. For an hour or so he sank into deeper unconsciousness, and when I left him this evening he was completely so, with pupils contracted, a little divergent squint, and very slight evidence of paralysis on the left side. There is no paralysis of motion

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on either side, but complete paralysis of sensation. He responded very slightly to tickling the big toe, but none from a pin prick. His breathing is sterterous and inclined to be of the Cheyne-Stokes variety. His pulse is quick and regular as to time. He has had no convulsions, but groans as though in pain. He lies perfectly flat, but uses both arms and legs.

My opinion is that the man has a syphilitic gumma in the brain. There has been no involuntary discharge of fecal matter or unine. I drew off two pints of urine this evening, highly colored, but otherwise normal. I got him to swallow a little water. I prescribed five grains of calomel. There is no elevation of temperature and he could not be aroused. He has been under Dr. Dercum's care for two years, but I do not know when the initial sore was contracted.

DISCUSSION.

Dr. Frank Simpson: This case is very typical of a case I saw a few years ago in a young man about 32 years old. He had a number of attacks similar to this. He went on and died, and this is what Dr. Cecil's patient will do. These cases that come on late nearly all die. This young man had a number of these unconscious spells and the iodides were pushed all the time without any relief. He became unconscious, lingering about a week and died. I think there is no question but this man has a gumma somewhere.

Dr. J. M. Ray: I would like to ask a question. Some time ago we were discussing tertiary intracranial symptoms, and Dr. Marvin said the iodide of potash did harm rather than good. I was surprised at that. When I was in New York, at the hospital, we had a great many of these cases, and they were given iodide with a bucket and dipper. Many of them would get better and disappear from the hospital.

Dr. Carl Skinner: I think Dr. Cecil is up against it as to prognosis. I think it is a case of syphilis, not of one lesion, but of many small gummata, that it is a miliary condition as shown by the attempts at accommodation. It will probably go on to death. As to the sciatica, I rather think this is an accidental complication, and that the syphilis has little to do with that.

A number of years ago I saw a man who had had syphilis twenty years before that. His wife's first five pregnancies terminated in abortions. I saw the fifth, which was a typical syphilitic infant. At the sixth pregnancy she was put on treatment and was delivered in another State, but the child died in delivery, but healthy. The seventh child, which I delivered, was born healthy and never showed any syphilitic symptoms afterward. Three or four years afterward the father had an attack very much like Dr. Cecil's case, but more convulsive, and died in a few hours with syphilitic apoplexy.

Dr. Louis Frank: I would like to ask Dr. Cecil how he knows that his man has sensory paralysis rather than motor?

Dr. J. G. Cecil: Because his limbs do not lie as they do when paralyzed. He moves both legs and arms and he resists attempts to straighted them out. He has control of his muscular powers, but he shows no sensation when he is pricked with a pin from the top of his head to his feet. He does show a little irritation when you tickle the bottom of his feet. His bladder contained nearly a quart of urine, and there was no involuntary discharge of fecal matter, showing that he has control of the sphincters.

He told me that he expected to return to Dr. Dercum shortly, and so I did not give any attention to his syphilis, as I should otherwise have done. I asked him incidentally if he had been treated with iodide of potash, and he said Dr. Dercum had given him some drops, of which he had taken as high as forty. Latterly Dr. Dercum had treated him for his nerve syphilis by mercurial inunctions. When I first saw him he had not used the inunctions for a while, and I advised him to resume

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them at once. He showed me a letter from Dr. Dercum a few days later, which also advised him to do this.

Dr. Louis Frank: This is an interesting case from many standpoints. The first question is whether it is a syphilitic lesion. I think the peculiar manifestation of symptoms is the most interesting thing about it. It seems an anomaly to me. It seems peculiar that he should present this class of symptoms, for they do not coincide with the localization which you could get anywhere in the brain. With a cerebral lesion it would not be bilateral. The motor fibres seem not to be impaired at all. It would seem to me that the localization would be somewhere low down in the medulla and that it is not a true cerebral lesion at all. I do not believe it is a multiple lesion, because it seems to me that picture is entirely different from this. They generally begin with loss of taste, and so on, without these other symptoms. I believe there is a good deal in the treatment of cerebral syphilis with antisyphilitic measures. In one case in the hospital, in a girl then a prostitute, but since married, whom I had under observation for several years afterward, she had beginning paralysis of one side, which became worse. She lapsed into a condition of semi-consciousness, with pain and complete hemiplegia. She recovered under enormous doses of iodide, though she still has some dragging of the feet. I think she has a gumma. In the gummatous condition, with localization, we can get some beneficial results; but where there is locomotor ataxia there is nothing to be hoped for by anti-syphilitic treatment, except temporary rest. I know of one or two other cases where there has been decided benefit, in which there was but one lesion.

I think the prognosis in this case is bad, and that the man will die.

Dr. Frank Simpson: Dr. Cecil will recall a case some years ago in a man of 65, who was walking along the street and had an attack, and lost the use of the right side, having almost complete paralysis. But it came on inside of a year of the initial lesion, and he was on active treatment when the attack came on. He improved rapidly under large doses of iodide and inunctions of mercury. The treatment was let up on for a while, and in a year he had another attack. It was three or four weeks before he began to get back the use of the right side. It has now been eight years, and he is practically well. He was kept under treatment for three years. The history of all cases that come on early is favorable, but if they come on after two or three years the outlook is unfavorable.

Dr. Cecil (closing): I really should apologize for the attempt to report this case. He had only come to me temporarily for the sciatica, which seemed to me entirely separate from the syphilis. He was fair enough to tell me he was under treatment for syphilis and that he expected to return to Dr. Dercum in a few days. So I did not feel the same interest in his syphilitic history and did not prescribe for that at all. I remember that he told me he had gone to Dr. Dercum on account of the unsteadiness in his gait, having had unsatisfactory treatment from some one else previously. I presume he had visions of approaching locomotor ataxia. When he came to me his gait was straightforward, but a little unsteady. He walked just like a man stiffened up with sciatica. When he sat down and when he arose it was just as in sciatica. He told me that Dr. Dercum had assured him that locomotor ataxia was not threatened and that his case was progressing very satisfactorily. He appeared to me to be very apprehensive about it. He analyzed his symptoms very carefully and wanted specific answers to his questions. I have been disposed to-day to think that this lesion is more likely in the medulla than elsewhere, possibly affecting the spine. His symptoms have not been characteristic of ordinary paralysis.

With reference to the treatment, it

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has been my purpose to put him on the the iodides and push them to the limit. I am aware also that this treatment has been questioned and that some think the iodides are not borne so well in chronic syphilis. According to my old teaching I have always thought the iodides gave the best hope of relief. I have never seen a case with the peculiar manifestations this man has.

[Reported by E. A. Forbes.]

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Friday, November 20, 1903.

BRAIN SYPHILIS.

[Continued Report.]

Dr. John G. Cecil: This is a post-mortem specimen of a case of brain syphilis, report of which was made a month ago. The man was then unconscious, and apparently in a very serious condition. This unconsciousness, with some slight evidence of paralysis, continued for three days, he gradually regained consciousness to a limited degree. From the time he regained consciousness until his death he was in a state of hebetude, although at times his intelligence seemed quite good, but very sluggish. His pulse remained high all the time, but after he became semi-conscious it began to go up. At first it had been subnormal, but it ran up to 140 before his death. His respiration was irregular all the time, the Cheyne-Stokes respiration being marked. While unconscious he was given fifteen grains of calomel, and when he could swallow was put on sixty grains of iodide of potash three times a day. Sixty grains of mercurial ointment was daily rubbed in. The iodide was increased to 90 grains and later to 120, three times daily, which he bore very well indeed. He became slightly salivated from the mercury, which was then omitted. He got so he could eat, recognize friends, and his kidneys acted freely, showing a large quantity of the ordinary salts of urine, with evidences of decomposition from cystitis. He went along for fifteen days, then died of exhaustion. When he got to the point where he could converse he showed no aphasia at all, and only a slight hemiplegia at times. Towards the last he had involuntary actions from his bowels and his urine had to be drawn all the time. He died without convulsions.

I secured permission to do a post-mortem only of the brain. This was done after he had been embalmed. The calvarium was easily lifted and there was no adhesion of the meninges. The dura mater was taken off, and a very curious growth was seen in this membrane. The brain had the general appearance of being blanched, and looked healthy all the way through except at the base. Here is a growth which was found in the falx cerebri, about half an inch below the upper surface of the brain. It is a calcareous deposit about 1¼ inches long, ½ inch wide and ¼ inch thick. That was all we found wrong with the dura mater. A number of cuts were made at the base of the brain, but nothing wrong was found until we reached the island of Reil, where we found a streak of soft brain tissue, probably an inch and a half long, an inch wide and one-fourth of an inch thick. Other than this the brain seemed to be perfectly healthy. The appearance of the brain under the knife did not seem to me to account for the condition presented, and this growth did not seem of sufficient magnitude to account for the symptoms. Whether the aphasia was produced by the growth or the soft area, I cannot say, but I believe it was due to circulatory disturbances around that calcareous deposit. I think the other symptoms referable to the brain were rather due to the soft spot near the island of Reil. The arteries of the brain seemed to be in good condition. The cord was not examined, but there was no trouble in the cerebellum or the medulla.

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DISCUSSION.

DR. C. SKINNER: If I remember correctly, the man had a good deal of trouble about the sciatic nerve. As to this calcareous deposit, I think the symptoms were too acute to be attributed to that. I think there must have been trouble lower down.

DR. J. M. RAY: I would like to ask if calcareous deposits are not quite commonly found in post-mortems? I think I have seen them often.

DR. CECIL (closing): Answering Dr. Ray, it has not been my fortune to see anything of this kind before, and I do not know whether it is common or not.

TUBERCULOSIS OF THE TESTICLE.

DR. LOUIS FRANK: I have recently seen two cases of a similar nature, and on account of the condition and the question as to what is best to be done, I have brought the specimens. The other specimen is also in the same line.

The first is from a gentleman 78 years old whom I saw several months ago with a strangulated hernia. At the operation the cord was found exceedingly thickened and very broad at the site of the hernia ring; there was a large hydrocele on that side and it was deemed best to remove the testicle. The man made a nice recovery.

The second specimen is a testicle from a tuberculous patient. The gentleman consulted me five or six weeks ago. He had received an injury last May, followed by pain and swelling, and six weeks later an abscess developed which discharged through the scrotum, leaving a sinus. The epididymis was very much thickened, and he had been losing flesh. There was no hydrocele. He was advised to have the testicle removed. The entire organ was removed, including the cord high up, and he made a very nice recovery, though he had a little suppuration. We found tubercle bacilli in the pus. The testicle itself in this case was uninvolved.

The other specimen is from a gentleman I operated on six days ago, with a history of hernia, for which he had been treated by different doctors with injections into the sac. He thought he now had a hernia on the other side as well. About two or three months ago an abscess formed on the scrotum, which discharged, and he presented with a sinus leading into the scrotum. No hernia was found on either side, but both testicles were enlarged, the epididymis of each being nodular, and at points on the left there was fluctuation. I was convinced his trouble was tuberculous, and advised operation. On account of the sinus, and the apparent extensiveness on that side, the left testicle was removed at once. Upon getting into the other, the epididymis was found involved so high up that it was also removed. Incision into the nodules showed them to be tubercular. The cords were removed as high up as possible. He has done very nicely, except for some suppuration on the side of the sinus.

The question that comes up in these cases is whether we shall sacrifice the testicle. I think it is better to do so than to run the risk of future infection. I do not believe that epididymectomy offers much hope for a cure, and where suppuration is inevitable, I believe removal is best. Most men would rather live for a number of years without the testicles than live a year or two with them.

DISCUSSION.

DR. THOS. L. BUTLER: If any portion of the testicle or cord is involved it is best to remove all of the testicle and as much of the cord as possible. We should not only remove that part of the cord which we pull down, but should open up the canal and remove all of it that we can.

DR. AP M. VANCE: It has been my fortune to remove a great many tubercular testicles and to have some cases refuse operation; and I have never seen sadder endings than those which have died in uremic convulsions due to extension of the process to the ureters. In one case these lasted four days.

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In the first case I think Dr. Frank's action was wise, because that precedure works a radical cure of the hernia. I agree with him as to the removal of both testicles, for many of these cases are worse off than before because of the mental state they get into. It is not uncommon for castrated men to commit suicide. It all depends upon how much knowledge of women they have had before and how long they can keep up the act.

There is a question of differential diagnosis in these cases between syphilis and tuberculosis. This hydrocele is suggestive of syphilitic testicle because it is often accompanied by hydrocele. In this case it is unquestionably tuberculosis. If it is possible to leave any of the best testicle and the man understands the danger, it is wise to give it a trial on account of the mental depression that accompanies removal of both.

Dr. F. C. Wilson: I would like to ask whether the tuberculosis was primary or secondary. If it was primary, the sacrifice of the testicle might save the rest of the system. If the disease is general, it is a question in my mind whether it is wise to operate.

Dr. J. G. Sherrill: I have had the fortune to see several cases of this kind, and the results of operation have not been satisfactory in some. Answering Dr. Wilson, I believe all cases are secondary, and that there has been infection elsewhere. This might be very slight, a small abrasion perhaps, and occasion little disturbance. We should remember that we are not dealing with a primary tuberculosis, because it has already gone through the circulation. Operation should always be done if we can find no lesion elsewhere.

I recently operated on a man far advanced in tuberculosis, with acute involvement of the testicles and great distress for five weeks previous to the time I saw him. I watched him for a while and then removed the organ, because it was ready to break down and increase the chances of further infection. I thought if he could get into the open air or resume his occupation, he would live longer. But ordinarily, when we can demonstrate tubercular lesions elsewhere, the testicle should be left alone. Whether taken out or not, we must always consider the likelihood of involvement elsewhere.

I remember removing a testicle which had been injured some months previously and was discharging. The cord was also removed high up. He went home, but in a few months returned with the other testicle involved. That was removed, and later other nodules developed, and he finally died of general tuberculosis. The prognosis is always grave. I agree with Dr. Vance, that if tubercular testicles are not removed, the results are very unpleasant.

Dr. Ap M. Vance: I would like to have Dr. Sherrill define what he means by "primary tuberculosis." If a man has a tubercular ankle, and it is removed, he lives a long time. Is that primary or secondary, without manifestations elsewhere?

Dr. J. G. Sherrill: Secondary. You are bound to have a secondary deposit if it goes through the blood. We may even have it in the lung, and it will heal up and a secondary deposit occur elsewhere.

Dr. Louis Frank: The mental effect upon the patient depends entirely upon the man. With this patient it will not have much effect, because I have told him that I left a portion of the testicle and he would retain his potentiality on that account. I hardly think he would have been very much depressed anyway.

I differ from Dr. Sherrill and think that most of these cases of tubercular testicle are primary in the testicle. I mean that is the point of primary localization of the bacilli and primary in that sense. By primary lesions I understand we mean the primary tubercular focus, and that is certainly in the testicle, or, more properly speaking, in

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the epididymis. The incision should be extended to the ring and the cord removed as far up as possible. If there is no involvement of the seminal vesicles and prostate a cure will result. The recurrence depends upon that in the vast majority of cases, but we often have infection of the other testicle. I take it that in such cases we have tubercle bacilli circulating in the blood and deposited there, the process being not due to an extension from the opposite side.

There was a history of injury in both cases, and I think that has much to do with the localization of the disease. All of us probably take tubercle bacilli into our systems, and it is a question of resistance. As the result of an injury we may have localization of the bacilli or a primary lesion.

The essay was read by Dr. L. S. McMurtry, entitled "Tubercular Peritonitis." See page 325.

DISCUSSION.

Dr. W. O. Roberts: I can recall but eight cases of tubercular peritonitis that I have operated upon, and in each case the nature of the disease was not determined until after the abdomen had been opened. In all but one there was considerable ascites, and in that one the disease was located in the region of the cecum. The first case was in a lady 40 years of age and an enormous amount of ascitic fluid was present. Nothing was done except open and close the abdomen, without any drainage at all, and to my surprise she made a recovery.

Another case in a younger subject was treated in the same way and got well. All the others died. I do not understand how this operation brings about such wonderful results, but there is no question that it does. When the disease is recognized it should always be tried.

Dr. J. B. Marvin: The essayist has covered the surgical ground admirably, and the medical as well. I think we should make some distinction between the forms of tubercular peritonitis we have. If it is simply a part of a general miliary tuberculosis, no operation will avail anything. I think the surgeon will bear out the statement that in the dry, adhesive, plastic form the least results are derived from operation. The other forms may be divided into acute and chronic; the acute is generally accompanied by fever, pain, ascites and so on; the chronic may be latent, overlooked and unsuspected until the abdomen is opened for some other trouble. In cases of that kind, with some adhesions, but essentially with effusion, operation does the most good. I think we should bear that in mind, and not blame surgery unjustly, but should recognize its limitations.

A question has suggested itself to my mind: While laparotomy does no harm of itself, how does it relieve or stay the progress of the disease unless it is by relieving tension? In tuberculosis anywhere, nature puts out these adhesive bands, which act as a splint to limit the disease, and these should not be broken up. Another point not fully touched upon, is that of the association of tubercular peritonitis with other troubles, such as cirrhosis of the liver, ovarian inflammation, hernia, frequently with tuberculosis in the hernial sac.

A word in regard to the point of entrance. I believe Dr. McMurtry, in his field, sees more cases where the infection enters through the Fallopian tubes. In the male, it probably enters by way of the testicle and epididymis. It may get into the circulation through the lungs, or be swallowed and pass through the gut and then invade the peritoneum. Dr. Frank's report makes me think it likely that tubercular peritonitis is more frequent than we used to think.

In reading up on this subject I have gotten the impression, and so taught, that this is the most curable phase of tubercular trouble. A very recent au thor makes the startling statement that

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if it is genuine tuberculosis it will recur with or without operation. He makes the distinction between genuine tubercular nodules and the other nodules which he thinks may not be tubercular at all.

One point which I watch closely in attempting to make the diagnosis is stiff rigidity of the belly. The whole gut seems to be thickened without ascites and you finally get tympany in the upper segment.

Dr. John G. Cecil: I thoroughly enjoyed Dr. McMurtry's presentation of the subject, but was a little disappointed that he did not tell us just how surgery relieves the condition. Two or three weeks ago I saw Dr. Bevan, in Chicago, operate on a boy with tubercular peritonitis of secondary origin. He operated first in the direction of the appendix, finding large cheesy glands, which he did not remove. There were also large cheesy masses just beneath the diaphragm. I was interested in his talk along with the operation, in which he took up the various theories as to how operation afforded relief. He tore them all down, but gave me no idea as to how it does the work.

Bearing upon the point last suggested by Dr. Marvin, I can report a case I had with Dr. Cartledge, confirmatory of the recurrence of this disease in the peritoneum. Some seven or eight years ago I treated a girl 15 years of age, strong and healthy, for what I diagnosed typhoid fever. It was hardly a typical case of typhoid, but the general aspects of the disease were very similar. She made an apparent recovery, but convalescence was delayed. After three weeks I practically dismissed the case. A short time afterward she began to have abdominal swelling. Dr. Cartledge was called, and I do not know what diagnosis he made, but he operated and found an accumulation of serum in the peritoneal cavity, and the peritoneum studded with tubercular nodules. Nothing was done except to evacuate the fluid and close the incision. She regained her health and developed into a rather stout, healthy young woman. She continued in good health for six years, when her abdomen began to swell again and Dr. Cartledge and I saw her; another operation was performed and practically the same condition found. The fluid was removed and the wound was closed; she made a good recovery and is now in apparently good health, about a year after the second operation. This is the only case in which I have personal knowledge of an operation being done a second time, but from this one case it seems quite possible for the disease to recur.

I remember in my surgical days to have opened up the peritoneum of a woman about 50 years of age; a large number of nodules studded the membrane; I washed her out with a mild bichloride solution and she made a good recovery. I think with Dr. Marvin that the distinction between the different kinds of tubercular peritonitis should always be made. The dry form is not at all favorable. I had a case of that kind last summer, but at all times the belly was perfectly flat; she grew steadily worse and died from secondary involvement. We declined to operate on her because we did not think the operation would be productive of good.

Dr. Thos. L. Butler: It seems unquestionable that the simple operation of opening the abdomen does good in the vast majority of cases, and it has occurred to me that it may be because of the application of light and air to the tubercular deposit. We know that light and air will unquestionably kill the tubercle bacilli, and it may be that this is the explanation. The tubercle bacilli may become immune to light and air to a certain extent, but if certain conditions are brought suddenly to bear, it may operate on them with fatal effect. The application of strong arc light to the staphylococcus pyogenes will kill it in five seconds, while it will take boiling water longer. If the operation be done on a sunny day, it might be well

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to expose the cavity to the sunlight for a few minutes.

Dr. Ap Morgan Vance: I have operated on all the different varieties of tuberculosis of the abdomen. I used to wash them all out and a number I drained. I never lost but one and that one was practically moribund at the time. There are a number of phases of the subject. I remember one case from Mayfield that was full of pus from the diaphragm to the pelvis, but she made a good recovery. I recall another case in a married lady where everything was matted together and there was a big abscess containing a gallon of nasty pus, probably mixed. She recovered and lived five years, dying of general tuberculosis. She came of a tubercular family.

There is another class of cases I have had—appendicitis cases with tubercular deposits around the omentum, associated with appendicitis, probably tubercular. I have seen several of these recover. The supposed gall-bladder cases with jaundice, operated on in an exploratory way, heal up and get well. I have had several which I am sure were tubercular, the gall-bladder being found unaffected, but local peritonitis, with adhesions.

I do not know how this operation affects the disease. Those I washed out used to do just as well as those I drained, and I did not see that it made any difference. I simply open the abdomen now and close without irrigation or drainage.

Dr. F. C. Wilson: It seems to me that the first point is to recognize the disease as early as possible. In some cases I am convinced that careful palpation will detect the friction vibration from the roughening of the surfaces upon each other. I have seen several where it was plainly apparent. It might be well to examine with reference to that point, and this, in connection with tenderness and warty feel of the abdomen, would be confirmatory of the existence of tuberculosis.

As to how the opening of the abdomen acts, there is one theory interesting to me, that whenever the peritoneum is opened there is an outpour of serum from the blood which contains antitoxic material, and in this way more is accomplished than by the slower processes of nature. There is no doubt but that opening of the abdomen does accomplish good.

In the case referred to by Dr. McMurtry of the young girl, she had had three or four similar attacks, which were not recognized as tuberculosis. At one time it was thought she had appendicitis, and a surgeon was telephoned for, but the trouble subsided before he started. She recovered entirely after some weeks, but at another time it was thought she had some liver trouble, and again pleuritic trouble. When I saw her she had this tenderness and continuous fever, and I thought I recognized this friction over the abdomen, and was satisfied it was tubercular peritonitis, starting in the neighborhood of the appendix. I finally prevailed upon the family to allow abdominal section to be made, and the immediate effect was very gratifying. The ocular appearance of the peritoneum proved it to be tubercular, and immediately her temperature dropped to the normal and remained there for four days, when fever recurred; when the wound was dressed it was found that one of the stitches had become infected. Whether this occurred from the peritoneum or not it is impossible to determine, but it gradually extended to the entire wound, and never did heal. She gradually sank, and lived four or five weeks, dying of inanition, because she had taken scarcely any food. The abdominal organs became matted together, and she succumbed. Whether the immediate beneficial effects of the operation would have continued without the infection cannot be stated, but certainly there was entire absence of fever until the time this infection took place. The dressing was not removed for three days after the occurrence of the fever.

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Dr. C. Skinner: My experience has been about that reported by the other speakers. As to the modus operandi, it seems to me that the classification into the two forms of wet and dry offers the key-note to the way in which we get relief; that it acts by relief of the tension. Those cases which are distended by pus or serum do better after the operation than the others; in some cases the results are lasting and in all beneficial. The dry cases in which there is no distension do not do so well.

As to Dr. Butler's theory that the cure is effected through the exposure of the cavity to light, I do not understand, if that be true, why such a great cry is made about the danger of tubercle bacilli floating about in the dust, which is certainly exposed to light and air. Light is destructive to a great many forms of germ life, but in this case I think it is the relief of the tension which gives the benefit.

Dr. Lee A. Stone: The only case I have ever seen was one of Dr. Cartledge's, which presented one very peculiar feature. He said that on making the primary examination through the vagina he was struck with the board-like feel, never having felt anything like it. On opening the abdomen he found the whole peritoneal cavity filled with these miliary tubercles, and one ovary was very much enlarged and tuberculous. She was suffering from a tubercular endometritis at the time.

Dr. J. G. Sherrill: My experience agrees with that of the gentlemen who have spoken, in that the dry cases are not those which give the best results after operation. Arguing from this, I am inclined to attribute the efficacy of the operation to the repair effort on the part of nature being assisted by the removal of the fluid. In the moist form there is a higher grade of resistance, and nature is pouring out a larger amount of fluid in the attempt to overcome the condition. Tubercle bacilli will not grow as rapidly in the presence of acute inflammation, and the condition comes on more frequently from repeated small injuries than from great traumatisms. The removal of the fluid produces a congestion of the entire serous membrane, and increased congestion increases the resistance and repair takes place.

Another factor is the collapse of the two serous surfaces, which become adherent and this plastic deposit becomes very firm. I think this theory is much more plausible than that of Dr. Butler. I have found in some forms of sacculated inflammation of the peritoneum we do not get such good results. Operation with a general ascites is more favorable than with a localized effusion. I recall the case of a young man with a sacculated effusion and a small amount of fluid; he died of general tuberculosis. I take it that the tendency of the fluid to reform in the sac was the result of failure of the two surfaces to come together.

I remember one case operated on with general peritonitis that I saw six years afterward in good health, though in bad condition at the time of operation. Some of the foreign writers argue that these cases would do just as well with rest and diet. Others inject air instead of making a section. The objection to aspiration is that you are likely to leave fluid behind.

Dr. Louis Frank: I think Dr. McMurtry has covered the field very thoroughly. I think if we have a primary focal lesion in the peritoneum itself we are far more apt to get good results. I have had the opportunity of seeing one case in which there seemed to be a primary deposit on the peritoneal surface of the liver. At the post-mortem I found a general diffusion throughout the peritoneal cavity. The point of infection was through the intestinal canal. I have seen other cases in which the primary seat of infection seemed to be about the cecum and appendix.

As to drainage I have had no experience, but theoretically I believe it is a bad idea. Serum is such a good pabulum for bacteria that it may permit secondary infection of the cavity.

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Like the others who have spoken, I can see no reason for the cure that results. I believe one reason why we get better results in cases with effusion is that infection has taken place in the cavity itself; i. e., the peritoneal covering, and the bacilli have not freed themselves in the peritoneal cavity. I have seen an encysted case with the intestines adherent and a large collection of fluid in between the coils. Aspiration of the cyst after opening the belly was done, and she is still living and in the best of health.

I believe aspiration is bad in any abdominal disease and that much more good can be accomplished with less danger by a small exploratory incision. Certainly we should not inject air.

I think Dr. Wilson confuses the physical signs in the chest with those present in abdominal cases, and that he will never get friction sounds in the abdomen extending over any length of time, as is the case in thoracic disease. Where there is friction sufficient to produce a fremitus, we would soon have adhesions which would do away with the friction sound. I do not believe it can be gotten by auscultation.

While I think these are proper cases for surgery, I have been struck in my reading with the probability of ultimate recurrence. A writer in one of the journals says that if these cases are followed up for a number of years, many will be found to have died of recurrence, though previously reported as cures. The question is, do they die of tuberculosis in other organs, or what becomes of them? How many can we follow through a number of years and say they died of some other disease and were cured of their tuberculosis? I think that is the most important point of the entire subject.

Dr. B. C. Frazier: I have seen several of these cases. They have all done well so far. One has gone for three years and another two and a half years.

Dr. McMurtry (closing): I think we will all reach the conclusion by and by that tuberculosis of the peritoneum is much more common than it is now regarded and also that a large number of cases recover spontaneously. Tuberculosis in this membrane does not behave as it does in other parts of the body. There are a great many operations for strangulated hernia without any suspicion of tuberculosis and the peritoneum is found studded with tubercles. I have had a large number of cases of tubercular disease of the tubes, with extension probably from the uterus and infection of the tubes and of the peritoneum through the tubes. Tuberculosis of the vagina and uterus is not uncommon, but in a large proportion of cases the nature of the infection is overlooked, when it is really tubercular.

As to the method by which the peritoneum is invaded, it is a very puzzling question, but there are two great routes. Dr. Vance alluded to the great frequency of tubercular appendicitis. There you have a place in the alimentary tract where stagnation takes place and ulcerative processes are common and a focus is very readily established. It is possible for there to be an invasion by that route. If you take the greater proportion of cases of tuberculosis in women infected through the tubes and the large number infected through the alimentary tract, you will have the greater number. There may also be infection through the liver.

As Dr. Frank stated, it is probable that every one at times admits tubercle bacilli through the mouth into the system and they are overcome.

As to the influence of abdominal section, with all the explanations that have been made from time to time by pathologists and surgeons, there is as yet no explanation that is tenable. It is beyond question that cases operated upon do get well, and unquestionably there are certain classes of cases where you know you will get good results. There is an explanation in the cases of that class where you have effusion, with the intestines matted together. A woman presents herself with encysted dropsy, and no surgeon can make the differen-

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tial diagnosis between that and ovarian cyst. A large number of these cases are found to be tubercular when the abdomen is opened. In such cases you are dealing more with the sequelæ than with the active process. When you open the abdomen she is not complaining of anything but pressure. You relieve the pressure of the tumor and she is well. You have dealt with the sequel, while the disease has practically expended its force. That explains the modus operandi of the operation in a certain class of cases. But take the theory of the admission of light. At the same time one must admit that it is the best surgery not to disturb the adhesions, and if it were the light that did the work, it would be wiser to separate all adhesions and admit light to all parts of the abdomen. These adhesions are conservative, just as in the case of pleurisy, and should not be disturbed.

Experience has taught us that these cases do best where we do the least. Open the abdomen, evacuate the fluid, and close it up. So I say we are still at sea as to the modus operandi in a large proportion of cases.

As to the practical outcome, there is a consensus of opinion that they should be operated upon. In these acute cases, with the hard, board-like abdomen, you have elevation of temperature, encapsulation, flat abdomen, and you may expect very little result, but there are some cases where the process seems retarded. As the operation in skilled hands is not mortal, I think it is certainly our duty to give every patient the benefit of it.

In those cases where there is extensive suppuration there would seem to be the greatest discouragement. I have irrigated the abdomen, cleansed out the fluid, and they have done splendidly, gotten fat and rosy and seemed apparently well. So I think we can say as the result of the experience of the profession at large that the prognosis of tubercular peritonitis is better than that of tuberculosis in any other part of the body, and the more thoroughly we can remove the focus in the acute stage the more certainly we will get good results. If we remove the sequelæ after the disease has expended its force, we get better results.

[Reported by A. E. Forbes.]

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Monday, December 4, 1903, with Dr. Ben Carlos Frazier, President, in the Chair.

INTERLIGAMENTARY MULTIPLE UTERINE FIBROID.

Dr. Turner Anderson: This is an interligamentary multiple uterine fibroid undergoing cystic degeneration. It was taken from a woman 48 years of age, who came to me from Indiana three weeks ago with a history of five years' illness. The tumor had grown rapidly in the last six months and at the time of her arrival she was scarcely able to walk. There was no marked cachexia. The diagnosis was obscure and I advised operation, which was done November 23. She had borne children, the youngest being 11 years of age. She bore the operation very satisfactorily; a great deal of normal salt solution was given during the operation and she was put to bed in good condition. She is sitting up to-day. She also had an umbilical hernia, which I cut out at the time.

MULTIPLE MYOMATOUS UTERINE FIBROID.

This specimen was removed November 29, the patient being 35 years old and the mother of one child. She presented the ordinary history of such cases. The appendix was found enlarged, and was removed also.

CHRONIC APPENDICITIS AND CHRONIC SALPINGO-OVARITIS.

This appendix came near to the nine-inch line. The operation was done on account of chronic inflammation and intrapelvic pain. The appendix was adherent to the right ovary and broad

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ligament; it contained no enterolith, but was as thick as my thumb.

PYOSALPINX.

These tubes were taken out without rupture, which is a matter of great importance. The appendix was removed in this case also.

DISCUSSION OF THE SPECIMENS.

DR. L. S. MCMURTRY: Dr. Anderson has given us a pathological treat. All of his specimens have some features of more than ordinary interest. The mammoth fibroid is unique in its morphology, growing from the right side of the uterus and leaving it almost intact. The specimen in which the appendix was involved is also of great interest. Surgeons are coming to give more and more attention to the relation of the appendix in these cases.

DR. AP M. VANCE: I want to mention one little matter of technique in connection with these tumors of the broad ligament. Care must be taken to prevent seepage that may occur, and I am in the habit of catching in my suture the posterior structures and mattressing down overlying peritoneum. I believe this is a very important thing, even in the ordinary hysterectomy neck. If we can prevent seepage we will save trouble. The peritoneal covering should be quilted down.

DR. LOUIS FRANK: I was especially interested in the first specimen, not only from its size, but from its relation to the peritoneum and its development behind the broad ligament. I think the handling of these tumors is one of the most difficult matters, and there is nothing which requires greater care. The danger of wounding blood-vessels, ureters, etc., is very great.

I was also struck with the removal of the appendix in one of these cases. This should be done in all abdominal work where it can be done safely. We should also look after the gall-bladder.

DR. TURNER ANDERSON: I was especially interested in Dr. Vance's remarks about the careful toilet of the stump. I leave enough when possible to give good support. Then I suture the stump and get as nice a fit as possible. Recently I have been in the habit of treating the stump with carbolic acid and alcohol; formerly I used silkworm gut, but now prefer chromocized catgut. I think the mattress suture is applicable in a great many cases for controlling oozing. I make the operation entirely sub-peritoneal by suturing the peritoneum over all.

TUBERCULAR PERITONITIS.

DR. L. S. MCMURTRY: The only point of interest in connection with this specimen of fibroma of the uterus is the presence of tuberculosis. Some of you may remember that at the last meeting I presented a paper on the subject of tuberculosis of the peritoneum, in which I suggested that it is more frequently encountered than generally supposed in connection with uterine and tubal diseases. The specimen was removed from a woman of 43 years and it is covered all over with tubercular deposits. The infection in this case evidently came through the Fallopian tubes.

DR. LOUIS FRANK: Tuberculosis should always be looked for. I have recently operated upon a young girl for uterine trouble, and found some small nodules which I looked upon as tubercular, but Dr. Weidner differed. Notwithstanding the fact that pathologists may differ with us, we sometimes stick to our own opinions, and under the microscope the nodules in this case proved to be tubercular. I did not operate for the tubercular trouble, and it was discovered as an incident in the operation for the pelvic disease. There was very little effusion in the belly. Where we have tuberculosis going out from the uterus, it is our duty to do a radical operation. Where the infection is primarily in the generative organs, it must be considered as a case of genital tuberculosis, and treated just as any other malignant disease of these organs, and everything removed as completely as if it were cancer. Where the peritoneal structures alone are involved, it

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should be looked upon as peritoneal tuberculosis.

Dr. Turner Anderson: I was glad to hear Dr. McMurtry speak so favorably of tubercular trouble, and it is very gratifying to hear his experience. My experience in dealing with tubercular peritonitis has not been very satisfactory.

Dr. L. S. McMurtry: The woman is a delicate woman, with a fairly good family history, nothing pointing to tuberculosis. As a rule these cases do not give a family history of tuberculosis, and most of the cases I have seen were diagnosed after the abdomen had been opened. There was nothing clinically in this case to suggest tuberculosis. I will make a further report after the microscopic examination has been made. In this case it will be observed that the tumor is practically myo-fibromatous in structure and these growths are almost entirely upon the peritoneum.

A word in reply to Dr. Anderson's remarks. The prognosis alluded to applies only to those cases where the tuberculosis is limited and where all of it can be removed. Where the tuberculosis is general the prognosis is as Dr. Anderson stated.

[Reported by E. A. Forbes.]

THE LOUISVILLE SURGICAL SOCIETY.

Stated Meeting, Monday, December 7, 1903, with Dr. Ap Morgan Vance in the Chair Until the Election of Dr. James Vance.

AMPUTATION.

Dr. J. G. Sherrill: This is the leg of the man presented before the Society at the meeting last month. The case is one of thirty years' disease of the bone, followed by an epithelioma of the skin around the point of exudation. The man is 50 years of age. The specimen shows the good repair of the bone following the previous operation. The ulcer is three inches in diameter, and has invaded the tissues down to the bone, and probably that also. There is a very firm, strong bone throughout the shaft. I amputated near the middle third of the thigh.

NEW INSTRUMENT FOR PROSTATECTOMY.

Dr. August Schachner: I wish to exhibit Dr. Young's instrument for pulling down the prostate gland in prostatectomy, thinking some of the members might be interested in examining it.

NEW INSTRUMENT FOR STRIPPING SEMINAL VESICLES.

Dr. W. R. Blue: This is an extension finger stall for stripping the seminal vesicles and prostate gland. It has only one drawback—that it fits the finger so tight that the operator must use glove powder to remove it readily. It is a great improvement on the old method of stripping these organs with the finger or with the metal stripper originated and used by Fenger, of Vienna. And, too, it gives an inch more reach to the finger.

The essay of the evening was read by Dr. Ap Morgan Vance, entitled "Some Clinical Observations in Intestinal Surgery." See page 327.

DISCUSSION.

Dr. Thomas L. Butler: I think Dr. Vance is to be congratulated on the results obtained in his work of this kind. It is a much better percentage than the vast majority of surgeons have had, if all cases are reported. I have had some experience in this line in the hospital, having operated on four or five gunshot wounds, one stab wound, and one at another hospital. All of these cases were bad to start with, as are most of those at the City Hospital, the wounds generally occurring in drunken rows when the men are full of beer, cheese and all sorts of things, and the contents of the gut are disseminated through the cavity. I have never had a recovery at all.

The majority of these cases were seen late and were very bad injuries.

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One of them had the large gut split almost across. I had a peculiar experience with one of the stab wounds in a mulatto about 50 years of age. When I opened him he had a sclerotic liver and a stab wound of the spleen. The room was warm, but every time we attempted to read the gut it would invaginate. The other stab wound was at St. Mary's, a small wound in the right iliac region. I found twelve wounds of the gut, and could find no more. When I flushed the cavity out I started up the most furious hemorrhage I ever saw, but could not find where it came from. The only way we could stop it was by packing in yards of gauze. I got him off the table in good shape and he rallied some, but developed peritonitis and died. At the post-mortem it was found there were thirteen wounds of the gut. Dr. Vance knows about the trouble of reading guts, but those who have never tried it have no idea how difficult it is.

The last case I operated on was at the City Hospital, a man of 35, with a wound of the small gut and of the stomach. He improved very much, and on the third day had a practically normal pulse and temperature. I said I had one successful case, but on the fourth or fifth day he began to go down hill, and died a week later. A gangrenous condition of the stomach and intestines was found, probably due to infection, but it struck me as peculiar that the man should have improved so much. I used silk in all of them. I would like for Dr. Vance to state just how he closes these wounds.

Dr. Louis Frank: I do not think the paper can be added to much. Most of us are in accord with Dr. Vance. My own experience has been limited to a few cases. Much depends upon the time after injury that we get these cases and the rapidity with which the operation is done. My work has been done entirely with catgut in the few cases of intestinal work I have had. Intestinal injuries met with as complications in my pelvic work have also been done with this class of sutures very satisfactorily. I have used silk and mechanical devices in experimental work, and while it would seem under the microscope that the Murphy button does beautifully so far as the scar and so on is concerned, I believe the suture is by far the best for practical purposes. I have had intestinal obstruction occur as the result of the use of silk in experimental work. The microscope in this case showed a great deal of connective tissue in the line of the cicatrix; valve-like formation has been noted in the intestine, which did not occur when catgut was used, though this may have resulted from too much infolding. While catgut is absorbed rapidly, I do not believe it is absorbed before we get firm union. I believe catgut No. 0 will remain in the intestine for five or six days, sufficiently long for perfect union to take place.

The method which Dr. Vance uses, which I got from him, is probably one of the best methods of closure. The suture is without question superior to any mechanical devices, for we do not always have these devices with us and there are other objections to their use. The suture known as the Connell suture is really a modified Vance suture, with the knot tied on the inside of the intestine. I do not believe silk should ever be used. I have done a great deal of work in abdominal surgery and have invariably used catgut with ideal results. I can only add my little experience to what he has already said and agree with Dr. Vance's conclusions.

Dr. August Schachner: I agree with Dr. Vance in all of his conclusions. I have not used catgut much. I am not as afraid of silk as he is. I have noticed, though, the great advantage catgut has over silk, which at times in appendectomies does make its way out and retards the epidermization of the wound. In gunshot wounds my experimental work teaches me that when we open the abdomen we should find out if it is a case with a *great deal* of hemorrhage; if so, evisceration

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should be practiced and the source of the hemorrhage sought. If there is but little hemorrhage, we should read the intestines.

As for the formation of the valve or cicatrix, I have never seen it occur, and I have resected fully a hundred of them. It was with great difficulty that we found the site of resection in dogs. I think this danger of narrowing the lumen of the gut has been overdrawn.

When the Connell stitch was first introduced the observation was made, though it was not my experience, that when we put in a double row of sutures there is danger of necrosis. I have uniformly followed that method and have had no such results. Connell makes the point, which is true, that we should endeavor to take in a portion of the submucosa, but that we really get into the deep mucosa; that nine-tenths of the Lembert sutures do not stop in the submucosa. He pointed out that with the stitch which he originated the danger of infection was not so great as we thought. The knot is placed on the inside and drains towards the interior.

In regard to the mechanics I contend that surgery consists of both science and art, one being intellectual and the other mechanical. I think the time has come when stitches should be taught men with cloth; a course in stitching is given in some universities now.

Dr. J. G. Sherrill: I think we can all agree with Dr. Vance in the main, and congratulate him on the work he has done. I think it is not so much the kind of a suture we use, as the way we put it in; not the special form of stitch, but good approximation is the thing. After closing with the intestinal suture, it is a wise procedure to take the intestine in our hands and try the tension to see whether the gauze will force out. I have never used catgut in suturing the intestine, because I got into the habit of using silk, though Dr. Vance has been very strong in its favor.

My experience with gunshot wounds of the intestines has not been very pleasant. I have had two cases, one of which was in the hospital, which got well; the other died. I have seen other cases, but I cannot justly claim either one of them, because they were operated upon during the hospital service of Dr. Grant and myself. The first case I had was in the City Hospital, a gunshot wound of the colon, which did not invade the peritoneal cavity. The man died on the fifth day from infection, because this wound was overlooked. This impressed on me the importance of exploration of the primary wound, especially when it is not in the median line.

The question whether these cases all demand operation is a very important one. We see them in civil life where the abdomen is apt to be filled with the contents of the intestines. It seems peculiar to me that in the late war, and also in the South African war, so many got well without operation. True, most of the bullets were small, and the men's stomachs were generally empty, and yet in civil life we lose every case if we follow a similar line of treatment. I think we should operate on all these patients by abdominal section.

The question of hemorrhage is of the greatest importance. I remember one case of wound of the external iliac artery eight hours before, with symptoms of shock. We explored the wound until it seemed to go into the abdominal cavity, which we opened. We found an extensive hematoma, but no wound of the intestine. In searching still further for the cause of the hemorrhage I pushed my finger through the slit and found a false aneurism. We clamped the vessel and dissected down. The vessel was caught with a pair of forceps, but the man had bled sufficiently to cause death. The post-mortem showed that the vessel was still clamped. In cases of marked shock we should always look for hemorrhage.

A word in reference to the case of hernia reported. I have had recently two cases of femoral hernia. One of

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these I reported to the Society, successful after resection of the loop of intestine. I was called to one case in the middle of the night, a case of strangulation, having gone on for two or three days after the first symptoms. I managed it badly, having no help save the anesthetist, and felt it unsafe to delay the attempt to relieve the constriction, so divided Gunbernat's ligament and reduced the hernia. She died during the night of necrotic condition of the gut. I think the best operation for strangulated hernia is the incision above Poupart's ligament. If you operate below you have a very small field and the intestine is put back into the abdomen without knowing if it is viable. If you go in above you can more readily relieve the constriction and can be certain as to the kind of intestine with which you are dealing. You can also readily close the ring from above. Gordon has devised an operation for that purpose without reference to strangulation.

Dr. Llewellyn Spears: I cannot speak to this subject from personal experience on human beings, but I have made some experiments on dogs, and have used Dr. Vance'e method and also catgut sutures, and with good results, all of the animals recovering. However, the condition of the bowel in the dogs was much better than that of the human beings mentioned by Dr. Butler. The dogs had been in the city pound and had nothing in the bowel but tapeworms.

One point of interest to me is whether it is best to flush the abdomen or not. I know it is Dr. Vance's custom to flush the abdomen, and he has done so with good results, but in recent literature it is strenuously advised not to wash out the abdomen with anything, but to sponge it out as dry as possible and use drainage tubes freely in all directions. It is still a question of doubt. A surgeon in London, with whom I was conversing recently, claimed that the death of President McKinley was due to this method.

Dr. Louis Frank: The success of any and all methods of intestinal suturing depends first upon the inclusion of the submucosa. Dr. Vance's method, which is a modified Wolfler, the two ends of the gut being placed side by side, the suture passes entirely through the intestine, beginning on the mucosa, the exit being on the mucosa in the opposite end of the bowel, tied as an ordinary suture. The Connell suture also passes through from the mucosa to the mucosa, including the two layers of bowel, just as Dr. Vance's suture, is not tied, but is then removed and passes back in the opposite direction, making a right angle suture. It is continuous, but not over and over; the last stitch is taken at the mesentery where the suturing began and the thread tied so that the knot remains in the lumen of the bowel.

Dr. Vance (closing): I am a catgut man because I think it is the best. Any man who uses silk will always make a tear of the serosa, and catgut never does that. No opening is left, and later on this is filled up even more completely by the swelling of the catgut.

The suture I use is a modified Wolfler. He ties inside the gut as long as he can, not including the mucosa. I go through everything and tie inside as far as possible, leaving about two sutures outside.

Answering Dr. Butler's question, after I have gotten out the intestine and controlled the vessels by ligature, I whip the mesentery up with catgut and commence at the mesenteric border and tie sutures all around as far as I can inside, and then I put in two or three interrupted Lembert sutures. Then I begin at the mesenteric angle and use the continuous Lambert suture.

As to the constriction the silk makes, I think there is no question about that. If Dr. Schachner remembers, we often found on re-opening the dogs that our sutures were floating around like black worms as foreign bodies in the cavity. Those done with silk would not admit

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the glass test tube and stretch out like those done with catgut. Silk will act as bridge work.

As to Dr. Schachner's advice about hemorrhage, I think we should go slowly about evisceration. I cannot recall a single case where complete evisceration was done that ever did well. By retractors and proper manipulation we can expose almost any part of the viscera, and if it is post-peritoneal we cannot do much with it anyhow. As to flushing, I do not think good results, around here, without flushing. There is too much stuff in there to wipe out. As to the kind of bullet, there is no question but that in the Civil and African Wars the difference of the wound was due rather to the bullet and the velocity. Not a single case of intestinal wound from a soft-nosed bullet would ever get well without operation.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Friday, December 18, 1903, with Dr. Ben Carlos Frazier, President, in the Chair.

The essay was read by Dr. J. M. Ray, entitled "The Surgery of Acute Mastoiditis." See page 335.

DISCUSSION.

DR. S. G. DABNEY: I have been more conservative than Dr. Ray, but in the last few years have been inclined to change my position. I have removed pus through Wilde's incision a number of times and have never seen symptoms of subdural abscess or other evil consequences. Increased experience and the general trend of opinion in this direction have led me to the conclusion that it is wise in these cases to open the bone also. It is better to err on that side. I fully agree with the wisdom of that course.

I was surprised at the figures from Bezold. I glanced at Hovell's book, and he quotes Bezold that 9 per cent. of acute suppurations are complicated with diseased mastoid, which would probably not recover without operation—about one case in ten. Bezold may have changed his figures in a later edition, however. I do not believe the majority of us see anything like 25 per cent. in private practice, for we see many cases of acute suppuration in which no operation is necessary. I should think one in ten nearer than one in four.

I think in these acute suppurations of the mastoid we should go into the antrum, and yet Politzer, the highest authority in the world, claims it is rarely necessary to go into the antrum in acute suppurations of the middle ear. When his book came out a year ago, I found he had not changed his opinion. He simply opens the cells in the lower part of the mastoid. It does seem to me a little irrational, but he is one of the most eminent men in the world.

I was interested in what was said about tubercular trouble. I saw a patient recently in consultation, a child 12 years old, who was brought to me a month ago with a slight inflammation of the middle ear. There was a little dullness and slight discomfort, but no fever or evidence of suppuration. She was greatly relieved by inflation. I sent her home and told her to come back in a day or two. She did not return. I was asked to see her again about ten days ago. Her physician thought she had typhoid fever, but the case has been obscure. He has now come to the conclusion that she has meningitis. When I saw her this next time, the ear was a little redder, but pain was not marked. She had meningeal symptoms, with very slow and marked intermittency of pulse and intense headache. I made an opening in the drum membrane and got a little muco-purulent discharge for a day. The headache continued and the case has gone on. She is tubercular in history and typically so in appearance. She was emaciated before this fever de-

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veloped. I am of the opinion she has tubercular meningitis, and her ear trouble may be of that type, too. Tubercular suppuration in the ear is generally painless.

Dr. H. Horace Grant: My general feeling about the importance of draining all suspicious suppurative processes would lead me to believe very much as Dr. Dabney about the general trend of opinion to operate on all conditions where there is a suspicion of pus. I would like for Dr. Ray to state at what time he thinks it is best to interfere in acute otitis media to do these operations. I seems to me that if I had acute inflammation of the middle ear and it did not begin to improve in ten days or two weeks, I would insist upon operation, because of the feeling I have with regard to drainage of suspicious suppurative processes. I do not know particularly about this disease. I have only operated half a dozen times and these in chronic cases, and my opinion is expressed on general surgical grounds only. Long continuance of hot applications in suppuration is an unwise step and they should be discontinued when suppuration is suspected and exploration made.

Dr. Adolph O. Pfingst: I think Dr. Ray's paper is a very instructive one. It brings out two points in particular. One is that we should be radical in our operations; second, even if we are radical, we may expect diseased conditions to follow. I had this impressed upon me during the summer by the case of a woman who had an extensive necrosis of bone following otitis media, where I thought I had removed all of the diseased mastoid. While smoothing the bone a small fragment of bone was dislodged and another small cavity of pus exposed beyond this another. This led me to believe that the foci of pus are not always of the same origin and that the inflammatory process may jump a number of cells. I believe that is the reason some of them are at times overlooked. We ought to go a little beyond the diseased bone, and I always feel better satisfied after I have exposed the lateral sinus.

As to the Wilde incision, I think the good that come from it is in the cases occurring in childhood, where, instead of bone, there is fibrous tissue covering the antrum, and a wide fissure between the squamous and mastoid bones. In adult life, I have never seen a case of sub-periostial abscess over the mastoid not depending upon the middle ear, but authorities cite such cases. If I were to meet with a case of mastoid periostitis with no symptoms of disease in the middle ear, and no previous history of running ear, I would be tempted to make a simple incision, advising, however, of the possibility of bone disease.

Dr. I. Lederman: I would like to cite a case showing one class we meet with. A girl of 23, white, came to me last Friday with the following history: In September she had an abscess in the ear, causing intense suffering for a week or two. The pain subsided, the appearance of discharge marking the time of the subsidence of pain. This discharge continued for two months, gradually diminishing. About three weeks ago headaches began on that side, with peculiar pain in the right eye and stiffness of the neck. These pains were not severe enough to cause her to stop work, being attributed to rheumatism and treated for that. She was sent to a general practitioner about a week before coming to me, and he also placed her on anti-rheumatic treatment. On her return a few days later he noticed a slight tenderness over the mastoid, with a boggy swelling far back on the mastoid. He referred her to me, and Dr. Ray agreed with me that she should be operated upon at once. The symptoms were very slight, beyond the stiffness of the neck and the headache. She was anemic in appearance, but had had no fever during the previous week. She was operated upon Saturday morning, and from the lack of general symptoms it was surprising the amount of bone destruction found. The entire mastoid process was

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removed, the diseased bone followed up over the lateral sinus, and the dura of the cerebellum exposed for an inch. The sigmoid sinus was surrounded by pus and granulation tissue. The external swelling was apparently due to the escape of pus through the opening of the mastoid emissary vein. The case has progressed favorably since the operation. I mention the case to show that we do not know what we will find when we open the mastoid. That is a point made by the early operators. It is reasonable to infer that if this case had been allowed io continue she would have developed intracranial symptoms or a thrombosis.

I had the pleasure this summer of witnessing the work of Politzer for six weeks. I was surprised to find a man of his age such a skillful operator; his technique is splendid. He does not open the antrum unless he finds a fistulous tract leading to it. He makes a free opening in the cortex and follows up the disease, claiming that it will heal more quickly, drainage from the middle ear being already sufficient. He does not operate very early, and claims that in the early stage of the disease we often find the islands of pus mentioned by Dr. Pfingst. He thinks that after eight days the intervening tissue is broken down and we have greater facility in evacuating it. He is strictly modern in his ideas.

There is one point that would help us a great deal. If we could judge by the shape of the mastoid bone what kind of tissue it is composd of it would be of great service. We know that the pneumatic mastoid will more easily break down than the dipletic one. There have been attempts by anatomists to classify the mastoids, but there are so many exceptions to any rule that may be formulated that this is not a safe guide. I have assisted in most of Dr. Ray's operations, have been enabled to follow the cases, and can only express the same conclusions which he has brought out in his paper.

Dr. Ray (closing): Sometime ago I read a paper before a local society upon a similar subject, and took up the indications for the operation, and so did not go into that fully to-night. At that time I dealt with the question of opening the antrum. I believe that in acute suppurative conditions of the middle ear where pain is continuous, the secretion abundant, and tenderness over the mastoid remaining for ten or twelve days, there is a mastoiditis present, and the chances are the case will come to operation. But I am governed in these cases by the sinking of the canal, the amount of tenderness and the time it remains.

With reference to the opening of the antrum in all cases, it has been my custom to do so, but there are cases in which, by following up the track of the pus, we can get at the disease without opening the antrum. But in the majority of cases the antrum should be opened. I should say that not more than one case out of fifteen or twenty I see require operation. When the external plate is intact, we should open up the antrum and use that as a landmark for further work.

Whiting lays stress on the cells in the zygoma, and says he finds them diseased as often as any other part of the mastoid.

Dr. S. G. Dabney: I would like to call attention to the class of cases without any tenderness, which are the most puzzling we have to deal with. They complain of no pain back of the ear. I believe where there is no tenderness, but a profuse discharge and high fever continuing over two weeks, we should operate anyway.

LOUISVILLE ACADEMY OF MEDICINE.

Regular Meeting at the Galt House, Wednesday, January 6, 1904, with Dr. Oscar Bloch in the Chair until arrival of the President, Dr. W. F. Boggess.

Essay by Dr. J. Garland Sherrill: "Cancer of the Intestine." See p. 332.

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DISCUSSION.

DR. J. K. FREEMAN: I have not had much experience with cancer of the intestine, but I want to emphasize the fact that the diagnosis is difficult to make. The only one occurring in my immediate experience occurred last spring. I was called to see a woman with symptoms of obstruction. Her bowels could not be moved, so operation was advised and submitted to. After opening the abdomen I found two very large ovarian tumors, which had to be taken out before I could get to the sigmoid. About two inches of the upper portion of the sigmoid were found involved, and this was resected. She lived only a few hours after the operation, but it was a very bad case, it having been twelve days since her bowels had moved.

As to symptoms, she had not been sick enough to consult a doctor in years. The constriction was so marked that I could not get my little finger through the loop.

DR. JOHN J. MOREN: Of the two cases of cancer of the intestine I have seen, one presented symptoms of tuberculosis as well as cancer, which is rather rare.

DR. G. A. HENDON: I want to thank the essayist for the information I have been able to gather from his contribution to the subject and to express my regrets that I did not hear the paper a year or two ago. I have had no personal experience with cancer of the intestine, but I had an intimate connection with a case which had been so diagnosed by two very careful observers, the patient having been examined once under an anesthetic and once without. The conclusion reached by both was that it was unquestionably cancer. They could not have examined the literature to which Dr. Sherrill has referred. The diagnosis was so positive that the family was informed that there were no chances for the patient's recovery. Opium suppositories were ordered and a bottle of chloroform to relieve the patient's suffering.

The patient had been sick from August to September, when I saw him and was told of the case. I could find no tumor, but there was marked emaciation, though not enough to justify a diagnosis of cancer. His temperature was subnormal, and he was having a large number of bloody evacuations. I decided to give him the benefit of the doubt, and made local injections; at my next visit I asked the family how long he retained the injection, and they said he had it yet. The man recovered in two or three months, and has been apparently well ever since. It is an illustration of how we may be misled, and it is also a source of encouragement.

DR. HUGH N. LEAVELL: Cancer of the intestine is difficult to diagnose, because we have so many intestinal diseases with the same symptoms from the start. We do not have the same amount of pain we usually expect, because it involves the mucous coat at first, and does not involve the peristaltic wave until it comes into contact with the muscular coat and produces diarrhea. This pain may be common to diarrhea, and thus abscure the diagnosis. We have little pain in cancer of the rectum, because we do not often involve the sphincter, being generally higher up, and for the reason alluded to previously.

Obituary.

DR. HAMILTON A. WEST.

Dr. Hamilton A. West, of Galveston, Tex., died in New York City, January 2, at the residence of his brother, Dr. James N. West, whither he had gone for treatment.

This news comes as a sad blow to Dr. West's many friends throughout the United States. He was well-known at all the meetings of the American Medical Association, being an active worker in the House of Delegates since its reorganization. As Secretary of the

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Texas State Medical Association, he was best known in the Southwest.

Dr. West was born in Russell's Cave, Ky., March 31, 1859. He was a descendant of Samuel West, a brother of an ex-Governor of South Carolina. His grandfather was a well-known physician in the South, and naturally the young man entered upon the profession. He was graduated with the highest honors of his class in Louisville, Ky., where he took his degree of M.D.

As a physician, Dr. West prominently identified himself with the interests of the City of Galveston. He was a professor in the University of Texas, and it was largely due to his efforts that the medical department of that university was founded. He made a special study of typhoid, yellow, and dengue fevers. He also wrote on the subject, pointing out the distinctions in the diagnosis of the two latter fevers which have often been confounded.

In 1897 Dr. West reported a case of yellow fever in Galveston, and brought upon himself the censure of many citizens, as they thought the announcement would injure the city. But Dr. West's diagnosis was confirmed by an expert who was sent there by the Government. It was Dr. West's contention that such an announcement was for the good of the State of Texas, and he was in favor of quarantining the city lest the disease should spread and there should be an epidemic.

Dr. West was twice married, and is survived by a widow and five children. His widow is a niece of the late Dr. J. A. Larrabee, of Louisville.

EVERY-DAY HEADACHES.

These may be considered, writes Hugh T. Patrick (*Medicine*, January, 1901), due to infection and toxemia from fever, Bright's disease, constipation, etc., to neurasthenia, to migraine, to eye-strain, or to anemia. The obscure ones are the head pains of neurasthenia and migraine. The former is not a severe pain, but an intense distress or discomfort, a sense of pressure, or constriction, or expansion, of heaviness, lightness, fullness, or emptiness, or of a foreign body, solid or liquid, loose or fixed, within the cranium. Frequently there is a feeling of hindrance to mental effort. A pain located in points, lines, squares, circles, etc., is neurasthenic. Not infrequently there is a dull ache behind or over the eyes, and a sensation of bulging or pressure in the orbits not relieved by glasses. The headache may disappear during social intercourse or or absorbing business, to reappear at the next opportunity for undisturbed self-contemplation. A headache which continues for months is pretty sure to be due to neurasthenia or to grave organic disease. The only cure is that for neurasthenia, but palliative treatment by strychnine, or 20- to 40-grain doses of bromide may be necessary. Migraine appears in distinct attacks separated by entirely free intervals, but during the attack the pain is constant and severe, and usually prostrates the patient. It is deep-seated, although the scalp may be tender. It is usually hereditary, and begins before the twentieth year. The attacks last from six to thirty-six hours, and occur at first two or three times a year; later as often as twice a week. Nausea or vomiting is rather frequent; there is often a definite prodrome, and during the attack sleep is impossible. An attack may be precipitated by pain, loss of sleep, mental strain, etc. Women not infrequently lose the affliction after the menopause and men after the age of 60. The author's treatment consists in the administration of fluid extract of cannabis indica, three drops after each meal, increased rapidly to the physiological limit and kept there. If this fails, try bromide or nitroglycerin, or a mixture of sodium salicylate, sodium bromide and aconitine.—*Medical News.*

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Louisville Monthly Journal

OF MEDICINE AND SURGERY.

"Alis Volat Propriis."

VOL. 10. LOUISVILLE, FEBRUARY, 1904. NO. 9

EDITORIAL STAFF.

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A. M. CARTLEDGE, M.D.
H. HORACE GRANT, A.M., M.D., BUSINESS EDITOR.
HENRY ENOS TULEY, A.B., M.D., ACTING EDITOR.

"ARE CONSUMPTIVES UNDER AN UNMERITED LIFE SENTENCE?"

An article under this caption appeared in a recent newspaper, clipped from one of those semi-medical publications for the laity.

It asserts that "this pitiful invalid has been pointed out by the doctors as a dangerous infection to be avoided. Because the doctors have a germ theory which they wish to defend, they have concluded that consumption is catching; that the poor consumptive is liable by breath or touch, by kiss or contact, to infect the whole family with consumption."

This last statement is an indication of the mental acumen and depth of reasoning and investigation of the author of this article, and in fact is a sample of the advice which is given by so many of these "antis," who are against progress in hygiene, sanitation or what not.

Had the artist stated what is claimed by the doctors "who wish to prove a a theory," emphasized what they do claim and urge, the absolute necessity of the proper disposition of the consumptive's sputum and disinfection of his handkerchiefs, drinking utensils, etc., he would have been nearer the truth, and would not have made more careless in these important details the hundreds of consumptives who may read the article quoted from.

What consumptive, if told the danger to his loved ones, but would welcome the instructions the doctors so gladly give? How many would rebel or consider themselves as exiled if told these things?

It is hard enough at best to instill in the minds of the laity the simplest hygienic laws, but in the face of such assinine articles as this, "The Consumptive's Life Sentence," the task is much more difficult.

HEMORRHAGE.

The possibility of occurrence of this dread complication should always be borne in mind by surgeon, obstetrician and gynecologist. Its occurrence following operations upon the pelvic and abdominal organs is by no means rare, despite the greatest care in technic, and from the fact that many deaths from hemorrhage, post-operative, have occurred, should spur the surgeon to greater attention to the minutiæ of technic and to the proper interpretation of symptoms as they occur after serious or trivial operations. The possibility of the subject being a bleeder should always be borne in mind.

Surgeons should report their deaths from hemorrhage, the manner of its occurrence and all the details. Such reports are valuable.

The occurrence of hemorrhage following premature labor is somewhat rare, and on this account mention is made of a reported case in the practice

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of Dr. Edward P. Davis, of Philadelphia.

The patient was a fourth-para, 23 years of age and quite anemic. On admission to the hospital she was five months pregnant and had severe hemorrhages, labor soon taking place. Hemorrhage recurred one week later. Exploration of the uterus was negative. The uterus was packed and hemorrhage controlled. At intervals of one week and two weeks later severe hemorrhages occurred, which were controlled in the same way. The patient died two weeks later of exhaustion. In the absence of a history of hemophilia and placenta previa an explanation of the cause of the hemorrhage is difficult. Scyntioma malignum was suggested as a possible cause.

It might not be amiss here to state that a persistently rapid pulse after an abdominal section for more than four or six hours is not caused by shock, and a fast pulse after a normal labor, when a condition of bradycardia is more often found, should cause hemorrhage to be suspected.

WORLD'S FAIR EXHIBIT OF MEDICAL JOURNALS.

The effort to establish an exhibit of the Medical Press of America at the St. Louis Exposition should be encouraged by all interested in medical journalism.

The medical publications of the State of Missouri will be exhibited through the efforts of Mr. Walter Williams, but sufficient space should be given for a general exhibit of the medical journals of the country.

Dr. Charles Wood Fassett, of the *St. Joseph Medical Herald*, has obtained space in the Palace of Liberal Arts and will endeavor to get up an exhibit, where every medical publication of the country can be found during the exposition. Details of information can be had through inquiry of him.

KAISERLING SOLUTION.

Because of frequent inquiries from our readers as to the formula for the Kaiserling's solution for the preservation of specimens with their natural colors, the formula is published:

Slices of organs from 3-5 cms. thick are placed from 3-5 days in

1. Formalin ..... 200 c.c.
   Aquæ .....1,000 c.c.
   Nitrate of Potash... 15 grm.
   Acetate of Potash... 30 grm.

They are then removed, the fluid allowed to drain off and placed in

2. Alcohol 80% for 6 hours, then
   Alcohol 95% for 2 hours.

From this directly into

3. Aquæ 2,000
   Acetate of Potash.... 200
   Glycerine..... 400

for permanent preservation in a dark place.

Notes.

Two physicians of Owensboro, Dr. T. J. Townsend and Dr. J. C. Hoover, have been denied admission to their County Medical Society. Dr. Hoover, in July, 1889, said a patient in consulation with Dr. Lambert, who previously having refused to sign the "fee bill" of the Daviess County Medical Society, was declared irregular, and for this was expelled from the Society. Dr. Townsend, in August, 1900, saw a patient in consultation with Dr. Hoover, was cited to appear before the Board of

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Censors of the Society, charges of violation of Rule 9 having been preferred against him. He was expelled from membership also, and the recent action was upon their application for reinstatement.

Rule 9 of "Rules and Charges of the Physicians of Owensboro, Ky.," reads: "We, the physicians of Owensboro, do hereby solemnly pledge ourselves to be governed by the above table of prices and rules, and if any physician practicing medicine in Owensboro refuses to do likewise, he shall be denied all professional intercourse."

A letter has been addressed to each of these gentlemen, and to the Secretary of the County Medical Society, asking for a statement of the facts in the case. Replies have been had from both Drs. Townsend and Hoover, but none from the Secretary.

We regret lack of space prevents the publication of these letters in full in this issue.

It is impossible, of course, at this distance to judge of local conditions as they appear to those on the ground, but it appears there is a most unwholesome condition of affairs existing, and it is to be hoped that the Councillor of the Owensboro district may be able to pour oil on the troubled waters that all the profession of Daviess county may be united in one organization.

Two of our exchanges come to us in new dress, the *Indiana Medical Journal* and the *Medical Fortnightly*, both in pure white covers, the latter with new arrangement of pages, the double column being adopted instead of the former single column page. Both of these changes add materially to the appearances of two excellent publications.

The following asylum appointments have been made by the Governor:

Central Asylum, at Lakeland—Dr. J. G. Furnish, Superintendent; Judge Matt O'Dougherty, William H. Newman and Charles P. Dehler, of Louisville, commissioners to succeed John Barrett and Dr. C. T. Satterwhite, whose terms have expired, and Charles F. Taylor, who has resigned.

Eastern Asylum, at Lexington—Dr. J. S. Redwine, Superintendent; Dr. Lewis Mulligan, first assistant, and Dr. A. Bailey, second assistant.

Western Asylum, at Hopkinsville—Dr. Milton Board, of Breckinridge county, to succeed Dr. W. W. Ray as Superintendent; Eli Berry, of Owensboro, to succeed Buckner Leavell, of Hopkinsville, as steward; Dr. W. A. Lackey, first physician; Dr. Stephens, second assistant, and Dr. Florence Meder, third assistant.

State Feeble-Minded Institute, at Frankfort—Dr. James W. Hill, of Nelson county, Superintendent, to succeed Dr. C. C. Owens, of Maysville; Ab. G. Rhea, of Russellville, to succeed J. Morgan Chinn as steward.

Dr. C. C. Owens will succeed Dr. Hill at Lakeland.

Dr. Daniel Voorhees Scott, of Jeffersonville, Ind., died on January 6. He was Secretary of the County Board of Health, and a physician of great promise, graduating from the University of Louisville in 1893. He was one of fifteen children, the remainder of the family all living, and is survived by a widow and two children. Dr. Marshall Varble, of Jeffersonville, has been appointed to succeed Dr. Scott as Secretary of the County Board of Health.

Dr. Wm. Phythian Banta was married at Frankfort, Ky., Jannary 5, 1904, to Miss Viola Sophie Jansen. Dr. Banta is an assistant surgeon in the United States Army, and is stationed at Fort Sam Houston, Texas. He was formerly located in Louisville.

County Societies.

The Bourbon County Medical Society held its regular monthly meeting by invitation at the palatial home of Dr.

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Frank Fithian on Wednesday, January 13, at 2:30 p.m., the subject for the evening being a "Symposium on Diphtheria."

Dr. F. L. Lapsley presented a paper on the "Etiology, Pathology and Symptomatology."

Dr. W. C. Ussery on the "Diagnosis."

Dr. Frank Fithian on the "Treatment."

The meeting was largely attended by local physicians, including homeopaths, and from surrounding counties.

After a general discussion a sumptuous 5 o'clock dinner was served in courses.

At the December meeting of the Bourbon County Medical Society the annual election resulted as follows:

President—Dr. Wash Fithian.

Vice President—Dr. Frank L. Lapsley.

Secretary-Treasurer—Dr. Chas. G. Daugherty.

Censors — Three years, Dr. Silas Evans; two years, Dr. F. L. Lapsley; one year, Dr. Wm. Kenney.

Dr. Robert T. Wood presented a paper on "Post-partum Hemorrhage," which was fully discussed by those present.

A general discussion of many matters for the good of the local and State Society ensued.

Book Reviews.

Progressive Medicine. Vol. IV., December, 1903. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences.

Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 434 pages, 46 illustrations. Lea Brothers & Co., publishers, Philadelphia and New York.

The contributors to this volume are Drs. Wm. T. Belfield, Jos. C. Bloodgood, Jno. Rose Bradford, Albert P. Brubaker, Charles Harrington, John C. Hemmeter, and H. R. M. Landis.

One of the most important contributions is that by Dr. Hemmeter, containing a resume of the new physiology of digestion, the bacteriology of dysentery and diarrheas of infancy, intestinal parasites and diseases of the pancreas.

Anesthesia is carefully considered in the article on Surgery, as are amputations, fractures and dislocations.

The surgical treatment of Chronic Bright's Disease is discussed, as are the various phases of enlargement of the prostate.

The Therapeutic Referendum is also valuable, describing such new drugs as Acetone, Antitoxines, Vioform, Isarol, etc.

With the new year the annual subscription price will be reduced from $10 to $6, divesting itself of the heavy cloth binding.

THE MEDICAL EPITOME SERIES.

Organic and Physiologic Chemistry.

By Alexicus McGlannan, M.D., Associate Professor of Physiologic Chemistry, Instructor in Chemical Laboratory, College of Physicians and Surgeons, Baltimore, Md. Series edited by V. C. Pedersens, A.M., M.D., Instructor in Surgery and Anesthesia, at New York Polyclinic Medical School and Hospital. Illustrated with nine engravings. Lea Brothers & Co., Philadelphia and New York.

The preparation of a book of this size from the wealth of material available is a great task. The author has borne in mind the needs of the student of organic and physiologic chemistry, and the result is a very useful little book.

The style of previous numbers of this Series has been followed.

Normal Histology. A Manual for Students and Practitioners.

By John R. Wathen, A.B., M.D., Professor of Surgery and Gynecology, formerly Professor of Histology in the Kentucky School of Medicine, etc., Louisville, Ky. Series edited by V. C. Pedersen, A.M., M.D., Instructor in Surgery and Anesthesia, at the New York Polyclinic Medical School and Hospital, New York City. Lea Bros. & Co. 1903.

The arrangement of this book so simplifies this subject as to make it a valuable guide to the student and practitioner desirous of "brushing up" on forgotten points. A chapter on technic of preparing and staining tissues has been included, which enhances its usefulness.

The book is liberally illustrated, a requisite in a book upon histology.

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LOUISVILLE MONTHLY JOURNAL

OF MEDICINE AND SURGERY.

VOLUME 10. LOUISVILLE, MARCH, 1904. NUMBER 10.

Original Communications,

INTESTINAL OBSTRUCTION DUE TO GALL STONES, WITH A REPORT OF A CASE.*

BY W. O. ROBERTS, M.D.

LOUISVILLE, KY.

On July 8th, 1902, at 10 P.M., I was called to Jeffersonville, Ind., to see a case of obstruction of the bowels, with Dr. Chas. Hancock. The patient was a very fat woman, 65 years of age, married, and the mother of several children. She had been in good health until the early part of the preceding March, when she had what is termed a very severe bilious attack, which was attended with nausea and vomiting—not excessive, however—abdominal pains, and some distention, with marked tenderness over region of the gall bladder. She was slightly jaundiced, and had fever lasting a week or ten days, during which time she was confined to bed. Ever since then, she had been troubled with constipation, and frequently had to resort to purgatives. Previous to this attack her bowels had been quite regular.

On the morning of July 7th, the day before I saw her, while on the street, she was seized with a violent pain in her abdomen, and it was with great difficulty she managed to walk to her home, a distance of several squares. Nausea and vomiting soon followed the pain. Dr. Hancock saw her within an hour after she reached home, and because of the intensity of the pain he gave her a hypodermic of morphine, which soon eased her. He then ordered broken doses of calomel to be taken at intervals during the day. The following morning, the vomiting still continued, and there being no movement from the bowels, a high enema was given, which brought away a few lumps of fecal matter, but very little gas. A large dose of castor oil was now administered, but was vomited within two hours. This was followed during the forenoon by several doses of salts, with the same result. In the afternoon several high enemata were given with no result. Just as I entered her room, she vomited about half a pint of stercoraceous material, and I was told that such had been the character of the vomited matter for some hours. She had complained of no pain since the one hypodermic injection of morphine. The surface of her body was cool, mouth temperature 98 deg. Fahr., pulse 124 and weak abodminal distention slight. There was no tenderness on pressure, nor muscular rigidity, and no tumor could be made out. The rectum was empty.

We advised that she be removed immediately to the Mercy Hospital, and have an exploratory laparotomy made. When placed on the operating table at midnight, her pulse was 134. The abdomen was quickly opened in the median line below the umbilicus. With my hand in the cavity I felt a hard lump in the right iliac region which, when drawn into the wound proved to be a large foreign body firmly impacted in the ilium. It was so tightly fixed in the bowel that it could not be moved in either direction. An incision was made therefore, directly on the foreign body through the wall of the intestine immediately opposite

* Read before the Jefferson County Medical Society.

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its mesenteric border, and parallel to it. When the gut was opened, the foreign body popped out, and it proved to be a large gall stone. The wound in the bowel was rapidly closed with a double layer of Lembert sutures, great care being taken, of course, to prevent the escape of fecal material into the peritoneal cavity. Owing to the patient's general condition, I did not delay the operation to examine the region of the gall bladder. After inserting a gauze rubber drain, the abdominal wound was closed. The patient never recovered from the shock and died ten hours after leaving the operating room.

The longest circumference of the stone is 4½ inches, and the shortest 3½. On one end of it is a distinct facet, which indicates that there was another calculus. Since operating on this case, I have made inquiry and have heard of but two other surgeons, in Louisville, who have met with a similar case. This, of itself, is sufficient proof of the rarity of intestinal obstruction from such a cause.

In looking over the literature of the subject, I found that cases of obstruction from gall stones are very seldom met with. Lathrop says that they are not so rare as enteroliths, and that the latter are frequently found to have a gall stone as a nucleus. Of 16 cases of enteroliths collected by him, a gall stone was the nucleus in 10 of them. Dennis says that "enteroliths formed about gall stones are the foreign bodies that most frequently cause acute obstruction." The stones may have a shell of ammoni-magnesia phosphate, and phosphate of lime, or phosphates combined with animal matter, or it may be entirely vegetable in structure." Gall stones have frequently been mistaken for enteroliths and vice-versa. In many instances it has required a careful examination to differentiate between them. Of 1,553 cases of obstruction from all causes collected by Liechenstein, there were only 41 due to gall stones Courvoisier collected 131 cases due to this cause, Trevis 30, Wising 50, Morris Richardson 133, Dennis 149. I have seen reports of several cases in the medical journals since these collections were made. Most generally the obstruction has occurred from one stone. but occasionally there have been two or more. The condition occurs more frequently in women than men, and usually in those who have passed the meridian of life. Of the 149 cases collected by Dennis 80 per cent. were in women, the youngest being 46 and the oldest 90. Courvoisier found 6 cases under 40.

As to the way large gall stones get from the gall bladder into the intestines, a very great majority of them pass through fistulous communication between the gall bladder and the alimentary tract. Dennis says in 33 out of 51 autopsies, a fistulous communication was found or evidenced that there had been one between the gall bladder and the duodenum, in one between the gall bladder and the stomach, in one between the gall bladder and the colon, in three where there was no fistula, the common duct was dilated sufficiently to admit the finger. and in the remaining cases this region was either not explored, or was found to be normal." When the communication is with the duodenum, the opening in the bowel is just below the mouth of the common duct, which is found to be patulous. Courvoisier found three cases in which the stone had passed through the common duct. Obstruction may be produced by the size of the stone, or by construction of the bowel, resulting from inflammation, brought about by the irritation produced by the stone, or an old stricture of the bowel may be blocked by the stone. Senn concluded as a result of numerous experiments, "that a foreign body large enough to fill the lumen of the bowel would be passed, provided the gut remained in a healthy condi, tion." This however is not always the case. Dennis reports a case where an enterolith much smaller than the caliber of the bowel produced complete obstruction, because of the tight contracture of the gut around it. "Above the seat obstruction, the gut was greatly dilated, and below it, it was collapsed." Such were the conditions in my case.

According to the International Text Book of Surgery the average circum-

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ference of a gall stone to produce obstruction is between 3 and 4 inches. As to the seat of impaction, the most frequent location is the lower ilium, occasionally it is in the rectum. Dennis gives the report of 83 cases where this point was determined by post-mortem or examination on operation with the following result:—Duodenum 1, jejunum 13, upper ilium 5, lower ilium 53, ilio-cecal valve 10, hepatic flexure of colon 1, sigmoid 3, At the seat of obstruction the gut becomes congested, later inflammation occurs, and finally ulceration and perforation of the gut may take place. A few cases have been reported where the stones have passed into the peritoneal cavity, and one where the perforation resulted in a circumscribed abscess which was opened through the abdominal wall, and the stone found.

There may be no premonitory symptoms whatever pointing to gall stone as the cause of obstruction. In some cases there has been a history of inflammation of the gall bladder with localized peritonitis, or of attacks of hepatic colic with subsequent appearance of gall stones in the stools, or simply a weighty, uncomfortable feeling in the region of the liver, with symptoms of indigestion, or of hemorrhage from the duodenum. There is no telling how long the stone may remain in the intestinal tract before giving rise to obstruction. Koerte reports a case in which there was a duodenal hemorrhage three months before obstruction occurred, and he thinks that perforation and escape of the stone occurred at the time the hemorrhage took place.

While we may suspect the cause of obstruction, in an old woman, who gives a previous history of gall bladder trouble to be a gall stone, the diagnosis is usually made at the operation, passage of stone, or at the autopsy. When complete obstruction takes place, the symptoms do not differ from those of obstruction due to other causes. Stercoraceous vomiting comes on early, and in thin subjects the stone may be felt through the abdominal walls. The mortality in this form of obstruction is very large—about fifty per cent.—that of the non-operated cases is slightly lower than the operated ones. This I believe to be due to the fact that the operation is too long delayed.

Indication for treatment does not differ from that of obstruction due to other causes. All sorts of purgatives are contraindicated. Morphine masks symptoms, and should not be used. Stomach lavage lessens vomiting, high enematas should always be thoroughly tried, and if relief is not soon obtained the abdomen should be opened, and the median line, below the umdilicus selected. The gut should be incised opposite its mesenteric border, and above the seat of obstruction, provided the stone can be slipped up, as the portion of the gut covering the stone is in a crippled condition,and may not heal readily. Occasionally it has been found necessary to do a resection, because of the condition of the bowel. The wound should be closed with a double Lembert suture. Great care should be taken to prevent the escape of contents of the bowel into the abdominal cavity. It is not necessary to use drainage as a rule.

DISCUSSION.

DR. J. H. PEAK: This large stone evidently could not have gotten into the lumen of the bowel without a fistulous opening between the gall bladder and the bowel. We know that the common duct is very much too small for a stone of that size to pass and I do not believe that a stone small enough to pass through the common duct could cause any obstruction by itself. Pathological conditions do exist whenever we have any inflammation about the gall-bladder as the result of stones, that bring about a catarrhal condition of the entire alimentary tract. This condition would predispose to obstruction from any cause and such a condition certainly existed in this case. Men have been known to pass much larger objects through the canal than a stone like this, without any obstruction. I think the catarrhal condition had something to do with this obstruction. The ilio-cecal valve is much smaller than the rest of the passage and this would most

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likely be the seat of the obstruction.

I have in mind a case I operated on two or three years ago. The woman had suffered from an attack of gall-stone colic and had a history of three previous attacks. The case had been diagnosed by other physicians and operation advised but refused on account of improvement. She had about 120 scars over her body as the result of abscesses resulting from the impoverished condition of her blood. Dr. Vance saw her with me in this attack and advised waiting. She went on for two or three days and I was called again and found the tenderness seemed to be all over the abdomen. Operation was done the next day. I opened the abdomen above the umbilicus in the median line and the obstruction found; it was not hard but the gut about it had a pinkish appearance. The gut was opened at that point and a mass taken out about twice as large as this stone, with two or three gall stones as a nucleus. After closing the intestine at that point, an incision was made further up, the gall-bladder opened and ten stones found. She recovered from the operation but I learned that she died about a year afterward from intestinal obstruction.

Dr. G. A. Hendon: I have never had any personal experience along this line but the etiology presents some interesting features. Osler puts the number of gall stone obstructions as high as one in thirteen; Leichtenstern puts the number at one in thirty; while Dr. Brandon, in an article giving some recent reports from the London hospital, puts it at one in forty-five.

A peculiar feature about gall-stone obstruction is that it occurs five times as frequently in women as in men. They are the chief cause of all the enteroliths; this was true in 133 of the 149 cases reported. The mortality outweighs that of all other kinds of obstruction, ranging above fifty per cent. and in inoperable cases sixty-three per cent. It has been urged that spontaneous recovery takes place in about fifty per cent., and this takes place by ulceration from the ileum into the colon; even then the stone may lodge in the sigmoid flexure. I have seen one case reported in which the physician was satisfied the stone had been present in the intestines for six months. It is an interesting question as to how the stone reaches the intestinal tract. I believe it has been said that a stone less than an inch in diameter can pass through the common duct.

As to the method of causing obstruction, some cases are reported in which the stone was found lying loose in the intestinal canal, producing an inorganic stricture, producing a spasm of the circular fibres. They also at times cause invagination of the mucous membrane and produce obstruction in this way. One stone was found firmly impacted at the ileo-cecal valve.

The location is of great interest. At least fifty per cent. are in the ileum but they have even been found in the urinary bladder. In one case the stone was expelled by emesis and a fistulous opening was found at the post mortem between the stomach and the gall-bladder. We rarely have perforation as the result of the obstruction. Spots of irritation are produced on the intestine and they are usually in a state of spasm. It is common to find the gut in a gangrenous condition and resection may be necessary.

As to the symptomatology, if the stone is high up, there may be absence of tympanites. The vomiting is very marked and is early stained with bile. Constipation is not always well marked and blood may appear in the stools; collapse is not great until late in the attack. They may or may not have gall-stone colic; sometimes there is jaundice. The thing that interests me most is the fact that the symptoms are not so acute as in other forms of obstruction. Two cases are reported in which the stones were felt in Douglas's cul-de-sac while making a vaginal examination.

The treatment is plain. I believe that it is usually found best to open the bowel above the point of obstruction to facilitate healing. The stones may be from three and a half to four inches in diameter.

Dr. August Schachner: It is much more favorable for a foreign body to ulcerate from within outward. When-

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ever a foreign body is in the general peritoneal cavity it has a greater range of motion and is not held tightly in one place. Gall stones generally get into the intestine by a process of ulceration. If the individual is beyond the meridian of life, there is a greater tendency to atony of the muscular strictures of the intestinal tract and this favors the lodgment of the stone long enough to cause inflammation and constriction. This explains the obstruction in many of the cases occurring in older people, and in a young subject where the opposite condition prevails, the obstruction would be likely to be by intussception. I have had one case where the presence of a worm produced invagination. It is a rule in intestinal obstruction that the further away from the stomach the obstruction is, the longer will the symptoms be delayed and the less the stercoraceous vomiting.

As to the treatment, the case illustrates the rule that whenever we have a case taken suddenly, the greatest amount of good will be done to the greatest number of people by early operation.

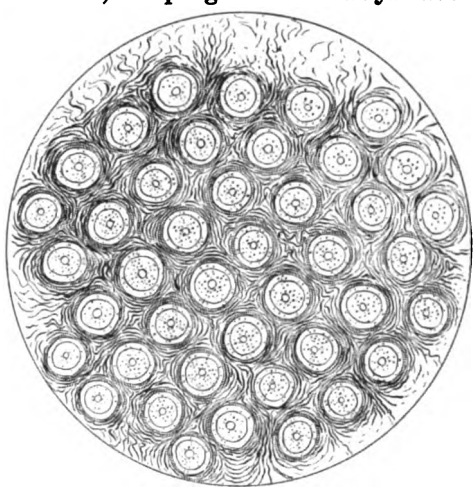
Dr Roberts (closing): I was unable to get a post mortem in this case but I am satisfied the stone was passed by a process of ulceration some time before.

THE SARCOMATA.*

BY W. R. BLUE, M.D.,
LOUISVILLE, KY.

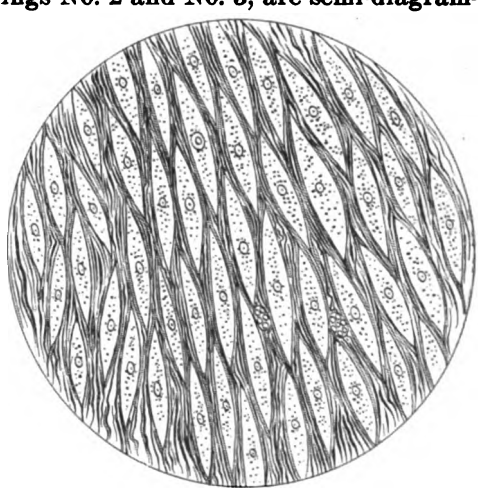
I was prompted to write this paper by predictions made at a meeting of the Falls City Medical Society four years ago this spring. There I reported a case of sarcoma of the testicle and presented a specimen. Three of the gentlemen present gave the patient, at the most, three years to live; and one agreed with me, that as the growth was removed early, the patient had a good chance for no recurrence. The report of this case, with others, will show that we were correct in our prognosis.

A few words here on the sarcomata and the carcinomata I trust will not be out of place. Sarcomata,as we all know, are connective tissue tumors. The cells lie imbedded in or are surrounded by connective tissue. So long as these cells are held in place by this tissue, metastasis cannot occur. Therefore, until degeneration takes place, these tumors are benign. When seen early, and situated where they can be removed, the prognosis is always favorable. When degeneration has taken place and the neighboring organs or lymphatics are involved, they are as deadly dangerous to the patient as the carcinomata.



No. 1.

Just here I will call your attention to drawing No. 1, which, with drawings No. 2 and No. 3, are semi-diagrammatic. No. 1 represents a young, small round-celled sarcoma with its supporting connective tissue. Here we see the cells intact, with no degeneration. No. 2 represents a young spindle-celled sar-



No. 2.

*Read before the Louisville Surgical Society. For discussion see page 886.

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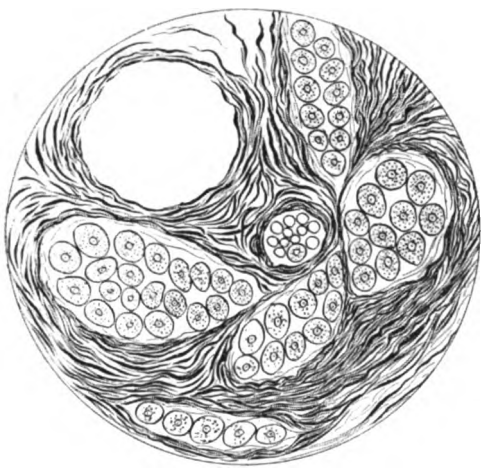
coma with its framework intact. The same applies to all varieties of sarcomata when seen early. Now let us look at drawing No. 3. This represents the



No. 3.

carcinomata. Here we find a connective tissue stroma, with the cells only held together by an intercellular substance, or simply lying close together without any support. Notice the stroma at one point in the drawing with the cells missing, they having been washed out in the preparation of the specimen, or mayhaps they were carried by the blood or lymph stream to some other part of the body to do their deadly work. This is a picture frequently seen by workers with the microscope. These cells appear to have the same power as the white blood cells which pass out of a blood vessel in inflammation to attack the invading host. There is no reason why, with active hyperemia, these cells near a blood-vessel may not pass into it and lodge in a small vessel in a distant organ and there multiply.

My experience in the removal of malignant tumors is confined to the testicles. All told, I have had five cases. I might have had more, but the general surgeon must needs poach on the genito-urinary surgeon's preserves, and naturally a large number of these cases fall into his hands. And yet, if I amputated a finger, or set a broken arm, mighty would be the howl that would go up, maybe. Yet I dare say, if I did do such a thing and did it wrong and a malpractice suit followed, the dear good fellows, as is their wont, would stand by me till I won out. Perhaps one or two would be inclined to "throw the gaff" into me, but the majority, like "Gloomy Gus," would say, "Oh, what's the use? Blue is a good fellow, and this will teach him a lesson," and it would.

I shall now in as brief a way as possible, report three cases operated upon for sarcoma of the testicle prior to and including 1900.

Case I. C. S., age 27, married. Consulted me in 1894. He gave the following history. About eight months before he came to see me he fell astride a fence while out hunting. His left testicle was injured by the fall. The pain immediately following was intense; in fact, it was so great that he did not move from the site where he received the injury for two hours. There was marked swelling following the injury. This was relieved by hot applications. Three months later he noticed a small lump on the body of the testicle. There was no pain at the time, so he did not think it worth while to consult a physician. As it continued to increase in size, he consulted me. His family history was good. No history of specific trouble of any kind. Examination of the part affected showed a growth about the size of an almond on the anterior aspect of the left testicle. It was firmly attached to the organ, soft to the feel and painless upon pressure. There was no varicocele, nor were the inguinal glands enlarged. He was put upon mixed treatment, with increasing doses of the iodide on the side. This was run up to sixty drops t. i. d. The mixed treatment was kept up for three weeks. The tumor increased in size. An immediate operation was advised. The testicle was removed and the patient made an uneventful recovery.

Pathology. The tumor, when incised at the time of removal, was of a milky white color. On scraping a milky-white fluid exuded. Three sections were made from different parts of the specimen for microscopic examination. The tumor was rich in small round cells. While there was more than the usual amount of fibrous tissue present, there was hardly enough to call it a

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fibro-sarcoma. The section made from the testicular part of the growth showed the organ to be involved. It was diagnosed as a small round-celled sarcoma.

The gentleman called at my office a few months ago for examination preparatory to taking out life insurance. There was no sign of the tumor returning. The right testicle had increased in size.

CASE II. J. C., age 36, single. Consulted me in June, 1896. In November, 1895, he had an attack of typhoid fever. Retention occurred during the disease. His physician relieved the retention with a metal catheter. Swelled testicle followed on the right side. This was treated with poultices and soon subsided. In April, he noticed a small lump on the testicle proper. Pain at the time was absent. The growth continued to increase in size. Counter irritation by the family physician only made it worse.

At the time I saw him the tumor was an inch in length, three-fourths of an inch in width at its widest, and about half an inch in thickness, and firmly attached to the testicle. Family history good. Never had a venereal disease. Cord was normal, and inguinal glands were not enlarged. Pain was absent except on marked pressure. He, too, was given mixed treatment for three weeks. The tumor continued to increase in size while under it. Removal of the testicle was advised and consented to. Patient left the infirmary in a week. Skin wound entirely healed. The examination of the specimen microscopically just after removal showed it to be yellowish white at points incised. Like No. 1, sections were examined from three different points of the tumor. Small spindle cells were found in great numbers, there being very little connective tissue present. Tumor diagnosed as a small spindle-celled sarcoma.

I last saw this patient two years ago. There was no evidence of a return of the tumor. Testicle remaining had increased in size. Patient had gained so in flesh I hardly knew him.

CASE III. J. W., age 29, single. In 1892 contracted gonorrhea. Three weeks later right testicle began to swell. Treated by hot applications, which soon reduced it to its normal size, except the epididymis which remained slightly enlarged, as is usually the case. Was discharged as cured of his gonorrhea, but later on was cut for stricture. In March, 1900, he noticed that the epididymis had doubled in size. He became alarmed and consulted his former physician, who told him it amounted to nothing and not to worry about it. A month later it had markedly increased in size. He then sought the opinion of other surgeons. Two diagnosed his condition as tubercular, another besides myself as malignant. He had the same antisyphilitic treatment as was given cases No. 1 and No. 2, the tumor increasing in size while on treatment. Removal of testicle was advised. Doctors Cartledge and Bullitt were with me in this operation. He, too, made an uneventful recovery. In fact, he felt so well the day following the operation that he laughed at the idea of keeping him in bed for a week. He left the infirmary on the fifth day without my knowledge.

Macroscopically and microscopically, the tumor was the same as in case No. 1, with the exception of a greater number of small round cells and less connective tissue. Sections of the tumor were submitted to Doctors Cartledge and Bullitt and both agreed with me in the diagnosis.

This patient was seen only a few weeks ago. He was the picture of health. He contemplates matrimony and wanted a clean bill of health, which I gave him.

My experience (though small) convinces me that—

First, Sarcoma, when seen early, and situated where they can be removed, do not recur.

Second, in the young, there is always a compensatory enlargement of the remaining testicle.

Third, young sarcomata cause very little, if any pain.

In conclusion, I want to say that I have made the mistake of diagnosing testicles as malignant which turned out to be syphilitic and, under other physicians' care, got well under antisyphilitic treatment.

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ACROMEGALIA, REPORT OF CASE.*

BY R. ALEXANDER BATE, A.B., M.D.,

Assistant Professor of the Theory and Practice of Medicine, Kentucky University.

LOUISVILLE, KY.

The case occurred in a young lady of about 28 years of age. She was of medium height, blonde complexion and amiable temperament. Father healthy; mother died of cancer at about 50 years of age. She came under my observation about nineteen months ago. Was referred to me by Dr. Jas. B. Bullitt on account of osteocopic manifestations.

Dr. Bullitt had previously removed a portion of the metatarsal bones of both feet, at the first metatarso-phalangeal articulation. These bones were found to be genuinely enlarged by an increase in the cancellous tissue.

The patient came to me complaining of 'rheumatic' pains, involving the head and bones of arms, legs, feet and hands; diminished and delayed menstruation; temporary insomnia; constant feeling of mental dullness; but remarkaby good appetite. Bowels and kidneys were reported as normal. Urinalysis showed only a slight increase in the excretion of uric acid. Patient however, had been upon anti-uric acid treatment for some time before coming under my observation.

The changes in the features of the patient were so symmetrical and gradual as not to have been noticed by herself or the family. The nose was large but not conspicuous, forehead slightly protruding, chin and lower jaw bone throughout were more observable than other facial changes. Space between teeth was not very pronounced. Voice rather harsh and tongue slightly hypertrophied. Complexion fair, but face and chest covered with acne. The most pronounced changes were in the phalanges of feet and hands. The feet were broader than natural owing to increase in the cancellous tissue of the articular ends of the metatarsal and phalangeal bones. The hands were thicker and broader than natural owing to apparent increase in size of articular ends of bones of fingers and thumbs.

In addition to the bony changes of the hand, about the articular ends of bones of several fingers on each hand there was a formation of a small quantity of fluid. The fluid when evacuated possessed floculi of whitish appearance, very much as in synovitis of rheumatic origin. There was a tendency towards reaccumulation of this fluid after its withdrawal. The extremities ached more or less continuously and were very painful at times, although patient frequently sewed, danced, walked, etc.

Patient was fairly well nourished; weight varied very little. She was broad shoulderd, but not markedly short necked. Was quite athletic and took a great deal of exercise. Upon two shouldered, dut not markedly short necked. Was quite athletic and took a great deal of exercise. Upon two occasions cerebral pains had been sufficient to require hypodermics, but generally all the pain was of a dull continuous type.

If there was any change in the hair it was not observable. The nails were broad and flat, and not at all incurvated, as in tubercular disease; nor was there any bronchial disturbance. The heart beat was one hundred per minute, but no organic change was apparent.

Paget's osteitis deformans, and hypertrophic pulmonary osteo-arthropathy could positively be eliminated. could positively be eliminated.

The prominent cheeks, chin and forehead, gave this patient the classical ovoid shaped face of acromegaly. An unfavorable prognosis was given.

After the use of ichthyol, the gold salts, emmenagogues and antiarthritic measures had been more or less unsuccessfully used, the patient was put upon tablets of pituitary substance, and a diet rich in phosphates and antiarthritic in character.

Apparently the condition of the patient improved. Menstruation became nearer normal, the mental hebetude disappeared. There has been no more acute pain, the enlargements were arrested, but there was no decrease in the size of the bony enlargments already existing. The heart

*Read before the Louisville Society of Medicine, January 4, 1904.

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beats became normal in number. The general condition of the patient is much better though the tablets were only taken for about two or three months.

The use of the pituitary substance seems rational, since in all cases of acromegalia the pituitary body has been found hypertrophied, although hypertrophy of the pituitary body has been often observed where no acromegalia existed. If there has been any persistance of the thymus gland in this case it was not recognizable.

Two classes of diseases follow changes in the ductless glands. One is due to a deficiency of its principal in the system; as myxedema, from a deficient thyroid secretion. The other is due to an excess of the principle in the system, as exophthalmic goitre, due to an excess of thyroid material in the system.

Acromegalia is presumably due to a deficiency of pituitary substance in the system, or to persistence of the thymus gland. Pituitary substance injected into the veins causes a rise of blood pressure due partly to increase in the force of the heart and partly to constriction of the arterioles.

There was certainly no indication for the administration of the thyroid substance in this case. The tachycardia being a direct contra-indication. The use of thyroid substance in acromegalia has been suggested however because of the hypertrophy that occurs in the pituitary body when the thyroid gland has been removed.

One "illogical" analogy occurs to mind, however, that I have not been able to make accord with the above reasoning.

In hypertrophy of the thyroid gland we have an excess of thyroid principle found in the system, evinced by the symptoms of tachycardia, exophthalmia, etc. Therefore in hyperthophy of the pituitary body should we not expect an increase in its internal secretion, if a ductless gland?

In the case reported it seems probable from the tachycardia there must have been an increase in the internal substance secreted by the anterior portion of the pituitary body. That is, the portion that hypertrophies after removal of the thyroid. Then the possibility of an *antrophy* of the posterior portion of the pituitary body naturally suggests itself, not only as the cause of some symptoms of acromegalia, but also as the reason improvement follows the exhibition of pituitary substance in acromegalia.

Furthermore since the physiologic action of pituitary substance is exactly the opposite of the thyroid principle when injected into the veins, there must be a pituitary principle that inhibits the thyroid principle. Consequently pituitary substance appears to be indicated in exophthalmic goitre.

The following conclusions may be drawn from the case reported.

First—That portion of the pituitary body, which partakes of the nature and formation of the thyroid gland, and is always hypertrophied in acromegalia, was the cause of the tachycardia.

Second—Since the pituitary substance exhibited controlled this very tachycardia, there must be some material obtained from the whole pituitary body that controls the thyriod like substance.

Third—From the above reason, pituitary substance is indicated in exopthalmic goitre.

Fourth—Undoubted good was obtained in this case from the use of the pituitary substance.

Fifth—It is probable the material antidotal to acromegalia may be found in the posterior portion of the pituitary substance.

CROUPOUS PNEUMONIA.*

BY F. C. SIMPSON, M.D.,
LOUISVILLE, KY.

An acute infectious disease pursuing a more or less typical course, caused by the invasion of the lung by a variety of bacteria, chiefly the diplococcus pneumonia. It is characterized anatomically by a fibrinous inflammation of the lung, clinically by a continued fever, by dispnea and by a variety

*Read before the Louisville Medico-Chirurgical Society, January 22, 1904. For discussion see page 377.

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of symptoms due in part to the absorption of toxins from the diseased lung. The infectious nature of pneumonia was inferred long before the discovery of the micro-organisms, which have been found to be of etiological importance by the frequent typical course. Frankel and others have demonstrated that bacteria are always present in the exudations of pneumonia, and in about 80 per cent. of all cases a definite varlety of the diplococcus pneumonia is to be found.

Croupous pneumonia usually attacks the strong and hearty, other than the feeble and weak, but both type of patients may be affected. It has distinct stages. Stage of onset, stage of consolidation, stage of absorption of the exudate and convalescence.

You will be guided by state of patient's pulse, by sounds of his heart, and his gneral condition as to his strength as well as the degree of respiratory embarrassment which is present. Each case must be a law unto itself. It must be remembered that as croupous pneumonia is an acute infectious disease, the patient may die not from pulmonary consolidation or cardiac distention, but from the malignancy of the infection.

One man with an entire lung consolidated may have slight evidence of general infection and toxemia. Another with a small area involved may show a grave toxemia and die in a very short time. We can therefore divide all cases of croupous pneumonia into three groups; those that are doomed to death by malignancy of the infection, those that are slightly ill, by reason of mild infection, and those that are between the two extremes that need the greatest medical skill to bring your patient to recovery.

The first symptom of the affection of the lung is a chill, generally sudden, mild or severe irrespective of the course the disease will take. Shortly after the chill there is fever and thoracic pain unless the disease is deep seated. The pain is usually referred to the nipple of the affected side, but may be located in the axillary region or in the back. Temperature usually rises rapidly after the chill, reaching 104 or 105 degrees. It usually remains elevated, with a slight morning remission and evening exacerbation until the crisis, which is usually reached on the seventh or eighth day. In a few cases the temperature falls gradually, reaching normal in a few days instead of a few hours.

The persistency of high temperature beyond the time of the critical fall, argues badly. Cerebral symptoms are especially marked in alcoholic persons. Hence delirium appears early in abusers of alcohol. Age is a prominent factor in the causation of this affection, and suffers early childhood and old age to be measurably exempt.

Treatment: If the patient is strong and robust, with a bounding heart, give him veratrum viride, by which he is bled in his own blood vessels. You must keep a close watch on the effects of the drug.

Since Dr. VanZandt's paper on the use of creosote in the treatment of pneumonia, I have been using creosotal or carbonate of creosote. Most authors give it in same dose as creosote. I use it in much larger doses, giving from 10 to 15 drops every 3 or 4 hours. I have had the best results from its use. It certainly improves the respiratory functions and reduces fever. I have only lost one patient since I began its use. It never seems to produce the gastric disturbances that creosote so frequently causes. When given early in the attack, the results are certainly marvelous. The temperature subsides, the respiration improves, and in the course of twenty-four hours the condition of the patient shows a marked general improvement. In later stages the results may not be so brilliant, yet very satisfactory. The cough, pain and temperature are very much changed, also the character of the sputum, and recovery very much hastened. The strength of the patient must be supported, the secretions and excretions must be looked after.

Dr. J. W. Frieser, of Vienna, says, "The treatment of acute inflammatory affections of the respiratory passages with creosotal has yielded entirely satisfactory and even brilliant results in my hands. Both clinician and practical physicians are fully aware that we formerly possessed no remedy that

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was half as satisfactory in its action upon pneumonic diseased processes. Our entire therapeutic armamentarium was symptomatic and expectant in its nature. But it is an unmistakable advance if experience teaches us the employment of a remedy which has an influence on the diseased process itself and possibly upon the specific organisms that cause it. The favorable effects of creosotal upon croupous pneumonia has been observed by a number of others as well as myself, and they are undoubtedly due to antiseptic and antibacterial action of creosotal, which is introduced in the body in sufficient quantity and in innocuous shape. Besides this it has a favorable influence on the heart and the patient's general condition. It causes, as I have often noticed, a rapid fall of temperature and retrogression of the local symptoms. The gastro-intestinal canal is in no way injured by its use. In some cases the inflammatory processes in the lung get well with such extreme rapidity that the method might be called an abortive treatment. The temperature rapidly sinks to normal, the general condition noticably improves, the tongue cleans and becomes moist, the appetite returns. The action of the drug was reliable and the recovery of the patients rapid." I have had similar experience with the drug in a number of cases of croupous pneumonia.

Only recently have I seen the very rapid effects of the drug. The disease running a rapid course and resolution taking place on the fifth day, convalescence at the end of a week. I certainly think we should use creosotal in cases of pneumonia. Two things are claimed for the creosotal treatment. In the first place it cuts short the disease in a most remarkable manner; secondly, it causes complete resolution of the disease focus, the lung cleaning up very promptly and no debris being left to cause a tedious convalescence.

DISCUSSION.

DR. JOHN G. CECIL: I cannot speak on this question to very great advantage, since the emphasis has been laid upon a line of treatment with which I am not familiar. But I welcome any

heir, which causes the patient more continued misery, and the physician more annoyance and disgust with the powers of his diagnosis, and the workings of his remedies—than just *headache!*

The distinctions between the different forms of headache are by no means easily made. As a general statement, it may be said that "neuralgic" headache is more or less on one side: extends to the face: is usually attended by great sensitiveness of the parts, and is of a darting, shooting character. Rheumatism about the head is attended with stiffness of the muscles of the scalp and neck. Congestive, febrile and toxemic headaches are characterized by heat of the head, with throbbing and pulsating pain. Ovarian and uterine reflex headaches are located on top of the head. Headache from tumors of the brain is commonly constant and in one spot, and is attended by functional disturbance of the brain and nervous system.

Although the physician may often be baffled in his search for the cause of headache in a patient, yet many cases will be perfectly patent. One, especially, in females, is constipation, by which the blood is poisoned, and the nervous centers unbalanced. Irritating food is a frequent cause of headache, and as such, should be avoided. Gastric irritability from catarrh, with acidity and flatulence, are all excellently combated by abstaining from food for one or two meals, when headache is threatened. Acidity of the stomach should be corrected by magnesia or soda. Impure gases, or insufficient ventilation in bedchambers, are a frequent cause of headache. Those troubled with nervous or sick headache, should imbibe hot tea, go to bed, put hot applications to the extremities, and remain as quiet as possible. Frequently such nervous headaches are due to nervous exhaustion and irritability, and a stimulant will afford speedy relief.

The bromides are especially good in headache from nervous irritability. A suitable solution of acetate of ammonia is an old and efficient remedy in sick headache. A one-quarter grain of morphine in a cup of hot coffee, has

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addition to our armamentarium for this incorrigible disease. If what is claimed for it can de demonstrated, I will take pleasure in using it as opportunity may afford. Up to this time I have been disposed to attempt nothing in the line of abortive treatment, believing it to be an infectious disease uninfluenced by any kind of medication known to date. But no matter how good a theory may be, when another man presents a practical demonstration, the theory goes to the wall. It might be difficult to demonstrate how any medicine could affect the processes in the lungs in pneumonia, outside of a serum, but when a man with good clinical experience, capable of making correct observations, tells me that it does so, I let my theory go. There are many things in medicine we do not understand.

Up to this time I have never used any specific treatment at all. I believe pneumonia is the most acute, deadly disease we have to deal with and the one responsible for more deaths than any other acute disease aside from tuberculosis. I hail with pleasure the advent of any remedy which proposes to do what this creosotal does.

The Doctor speaks of using veratum viride in the early stages of pneumonia in the healthy and robust. I could never see any reason why it should be used for I believe it takes the place of the phlebotomy of the ancient practitioners. I believe we can accomplish almost as much by purgative treatment without any depression of the heart. I do not understand how a patient will be very much benefitted by simply depressing the heart, which is all I think can be demonstrated from the use of veratum viride. It is a remedy I am afraid of, perhaps because I am not sufficiently familiar with it. I am accustomed to take every means of preserving the heart's action and do not believe that any kind of treatment that depresses the heart can be of much service.

The treatment of pneumonia resolves itself into two or three propositions. It is one thing in the healthy robust individual, and I think a very simple thing, though many of them die; but it is a very different thing to treat the disease in a debauchee or a broken-down business man or a man previously diseased with diabetes or Bright's. In every case we must treat the man and not the disease, for what will apply to one class will not to the other. In the young, healthy, robust, the treatment of pneumonia in my hands has been to let them alone and let the disease run its course. In the broken-down class, I begin at once to to support the heart's action with stimulants, tonics and so on from the very start, with strict diet and little disturbance by examinations.

After all, we must admit that the treatment of pneumonia has not advanced much up to the present day, except that we are more sensible in selecting our cases for treatment. Most of the healthy ones will get well and most of those previously diseased will die.

Dr. Carl Skinner: I do not believe healthy individuals take pneumonia. I have been a strong advocate of creosote for a long time, but I lean to creosote itself in guaiacol or some other form. Creosotal is a combination and is a very palatable way to give it. I think the benefit comes through its antiseptic effect in checking the poison, just as in tuberculosis.

It is refreshing to hear a man express himself so confidently of a drug. My habit has been to support all these cases. Usually the first shock limits the extent of the disease; if only one lobe is involved, the disease will stop with that. If we can support them long enough they will get well. I believe in nutritious diet, with attention to the bowels, skin and kidneys. I do not think there is any specific for pneumonia at all. The most surprising results come when least expected. I like creosotal but I do not share Dr. Simpson's confidence in it.

Dr. Nuttall: I was wondering why Dr. Simpson uses creosotal and Dr. Skinner has brought out that it is a myotic. I should think we could go a little further and give a certain amount of calomel in these robust cases. Instead of using veratum viride, I very often give digitalis, not with a view to stimulating the heart's

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action but, taking it for granted that the right heart has all the work to do and digitalis contracts the arterioles, if we retard the blood we transfer it from the arteries to the veins.

In treating pneumonia, whenever we have ten or fifteen doctors we have ten or fifteen lines of treatment, generally because we do not agree on the pathology. Of late I have come to regard pneumonia rather as a thrombosis than as an inflammation of the lung tissue. I think, too, it is an infectious disease, due to the pneumococcus. If we want to pursue the line of treatment from the antimyotic standpoint, we can give large doses of calomel. It appears to me that if we get calomel into the tissues, the lung being very vascular, we may cut it short by the effect of mercury on this germ. There is one other reason which leads me to think it may be a thrombosis: We know that the lungs do not receive any enrichment from the blood which flows through them but is supplied from the bronchial tubes through the pulmonary artery. We only have these grave lung functions when the solidification is so great that it nterferes with the circulation in the pulmonary artery. At any rate, I would not have said anything but I have been losing some pneumonia cases lately, and I believe physicians should agree what the treatment should be.

Dr. B. C. Frazier: I was extremely glad to hear Dr. Simpson speak so encouragngly about creosotal. I have treated comparatively few cases of pneumonia and have had no set treatment. I do not understand how Dr. Nuttall can demonstrate his theory about getting mercury into the lung, though I know it has been the custom of many physicians to give heroic doses of mercury and nothing else, as much as sixty grains a day. If this creosotal does have some specific action it must be a remarkable agent to use and I shall take great pleasure in using it. I do believe creosote and carbolic acid have some specific action in these conditions and that carbolic acid is about as efficient as creosote and even better borne. Dr. Nettleroth started me to using it and I have been using it more and more and think well of it. If I see any more pneumonia I shall try creosotal.

Dr. Simpson (closing): Each case of pneumonia is a law unto itself. Of course, I do not mean to say that creosotal is the only treatment for pneumonia, for that depends upon the physical condition of each individual. But I have never seen the benefit from any drug that I have from creosotal, not only in the lobar but also in the atypical varieties. We know that creosote is taken up very rapidly and thrown off through the lungs and you can taste it in the sputum in twenty-four hours. Hence, its effect on the organisms. Of course, in some the toxemia is so great that nothing does any good. In a recent case which looked very desperate, relief came in four or five days. I put him on creosotal, fifteen drops every three hours, and in 42 hours he showed decided improvement. I also used it in an old gentleman of 76, who looked as if he would die. In two or three days he began to get well. I have used it in a number of cases in the last two years and found it very valuable. Diet must of course be closely watched at the same tme.

Another hing that I have observed n its use is that the temperature quickly drops, three or four degrees in 24 hours, and when you let up on the creosote it rises again. It should be kept up four or five days after all fever is gone. I have never noticed any effect on the kidneys at all. I know nothing about the proportinos of creosote found in the blood tests. I could find nothing in the literature on the subject.

HEADACHE.

BY D. L. FIELD, M.D.,
JEFFERSONVILLE, IND.

There is scarcely any other complication, to which the human system is been found to be an excellent remedy for nervous headache in females, at about the menstrual period. The acetate and muriate of morphia have a similar effect, and may be tried. The continued employment of such remedies as morphia, however, is not to be commended, as the habit is to be dread-

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ed. Hydrate of chloral has a transient effect in headache, in doses of from ten to twenty grains. Sometimes the application to neuralgic headache of equal parts of chloral, camphor, and menthol, which liquefies, and applied with a brush on the seat of the pain, acts like a charm.

Two grain doses of citrate of caffiene, every hour, is said to be very effective in sick headache, one dose frequently affording relief. It is seldom rejected by the stomach. In cases where the use of coffee has been habitual, it acts exceedingly well.

A good prescription in nervous headache, is:

℞ Ammonia muriat..... ℥ij
Morphiæ acetatis....gr. j
Caffine citrate.....grs. xxx
Spts. ammonia arom..f. ℥j
Elixir guarana.
Aqua menth pip.,...aa. ℥iv

M. Sig.: Dessertspoonful every half hour till relieved.

Monotromated camphor has been found to be a very efficient remedy in headache from over brain work, through study, or excitement. Dose, two to five grains, in tablet or capsule.

Ammoniated tincture of valerian has been used frequently for purely nervous headache, particularly of the hysterical kind. Dose, a teaspoonful.

Headache, faintness, or drowsiness, may be relieved sometimes by simply inhaling the fumes of hot vinegar, and placing flannel wrung out of the same, over the seat of the pains.

Headache due to the acidity of the stomach is often relieved by the carbonate of ammonia, or bicarbonate of soda, in hot water. Dose of ammonia, three grains in sugar and water, and soda, a small teaspoonful in a half glass of hot water. In case of flatulent stomach, with headache, the aromatic spirits of ammonia may be taken in teaspoonful doses if necessary, but usually in thirty drop doses, in water. It promotes the eructation of gas, and relieves the nervousness accompanying such cases of headache.

Camphor water, in tablespoonful doses, oft repeated, is a good remedy, as is also 2 or 3 grains of gum camphor. In the periodical headaches, cannabis indica, sulphate of berberina, and elixir of guarana, have been much praised. Cannabis indica can be given in one-third to one-half grain doses, three times a day in recurrent headaches of migraine.

Guarana controls headache much like tea and coffee, and is valuable in recurring headaches of females at the catamenial period, and in the headache following a debauch, with throbbing temples and bloodshot eyes. The elixir may be given in a tablespoonful dose, oft repeated. Elixir of paraldehyde is used in the same way. Oil of lavendar may be used topically to calm nervous headache, and can be given internally in four or five drop doses. Oil of peppermint is used much by the Chinese as a local analgesic and as a balm for nervous headache, frequently by painting over the seat of pain with a camel's hair brush will afford prompt relief in neuralgic headache. Oil of origanum may be used the same way, and for the same purpose. Five grains of black pepper in capsule, often relieves. Bathing the head freely with equal parts of bay rum and spirits of lavendar will often afford great relief in headache. Headache associated with constipation, calls for brisk purgation, preferably large dose of Epsom Salts, in warm water. For frontal headache, a "brow pain," if the bowels are not confined, ten drops of dilute nitro-muriatic acid in a wineglassful of sweetened water, or twenty grains of bicarbonate of soda, will frequently relieve. Sometimes the tincture of nux vomica in ten to fifteen drop doses, repeated in half an hour, will stop headache. It is especially effective where there is a weak, catarrhal stomach, and the remedy may be given for days, in ten drop doses, before meals.

A fine local remedy is a quart of hot water, half pint of salt, an ounce of ammonia, a half ounce of spirits of camphor, mixed, and kept in a tightly corked bottle. Saturate a cloth with it and apply to seat of pain. For a headache, with a sense of fullness, and a throbbing sensation, place the feet in a hot salt and mustard bath, which from its derivative effect, will relieve such a headache.

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A tablespoonful of powdered charcoal, stirred in a glass of water, and taken at one draught, is excellent in headache where there is a fermentation in the stomach, with eructations of foul gas.

Digitalis, strophanthus, and convallaria are useful in headache with cerebral hyperemia, and forcible heart action.

When the head throbs violently, and is hot, instinct seems to suggest cold and pressure to the head, and a common application is the wet bandage bound tightly around the head. The method is instinctive, for it has been employed from time immemorial. Shakespeare is often quoted to illustrate the morbid state of the body, as well as the passions of the mind, and he also testifies to this ancient practice. He says: "When your head did but ache, I knit my handkerchief about your brows." Again, Desdemona to Othello: "Why do you speak so faintly? Are you not well?"

Othello: "I have a pain about my forehead here."

"Faith that's with watching! 'T will away again. Let me but bind it hard, —it will, within this hour, be gone!"

Finally—we have *malarial* headache; *gouty* headache; *rheumatic* headache; *uremic* headache; *alcoholic* headache; *dyspeptic* headache; *anemic* headache; *congestive* headache, from cerebral disease, such as tumors or diseased blood vessels.

For the malarial type—quinine, iron, arsenic, and bitter tonics; gouty headache—colchicum, bromides, lithium, vichy water, and antacids generally; for rheumatic headache—iodides and Faradic current; uremic headache—eliminants such as acetate of potassium, infusion digitalis, and saline cathartics; acute headache, from alcoholism—aromatic spirits of ammonia, spirits of camphor, or tincture of hyoscyamus; dyspeptic—tincture nux vomica, dilute nitro-muriatic acid, and bicarbonate of soda; constipation headache—free purgation, followed by rest and quiet; congestive headache—quiet, dark room, hot applications to extremities, bromides, cannabis indica, morphia, and active saline purge; anemic headache—strychnia, iron, manganese, gentian, brandy, and nutritious diet. Headaches from cerebral tumor—bromides, iodides, morphia, and chloral.

Among the later remedies employed so extensively for the alleviation of all forms of headaches, whether nervous, febrile, or neuralgic, are the various coal tar derivatives. Also such preparations as passiflora incarnata, compound syrup of bromides, tongaline, neurosine, heroin, trional, sulfonal, etc., etc.

For neuralgic headache:

℞ Antipyrine ..... ʒ j
Monobrom. camphorat.
Citrate caffine...aa. gr. xxiv
M. Ft. capsules No. 24. Sig.: One or two every 4 hours.

Or,

℞ Monobrom. camph..gr. xxiv
Enquinine..... ʒ j
Ext. hyosciamus....gr. vj
M. Ft. capsules 12. Sig.: One every 4 hours.

℞ Strych. sulph.....gr. ½
Dil. nitro-mur. acid..f. ʒ ij
Spts. chloroform.....f. ʒ vj
Tinct. zingibaris.....f. ʒ iij
Elix. simp., q.s. ad...f. ʒ iij
M. Sig.: Teaspoonful, in water, 3 times a day.

Or,

℞ Ext. nucis vom.....grs. viij
Zinci phosphide.....grs. iij
Ferri reduct..... ʒ ss
Enquinine ..... ʒ ss
M. Ft. caps. No. 30. Sig.: One after each meal.

℞ Potass. citratis..... ʒ ij
Spts. juniper.....f. ʒ xij
Spts. etherls nitrosi..f. ʒ iv
Infus. scoparicus..... ʒ xij
M. Sig.: Wineglassful 3 times a day.

Some others recommend copious intestinal lavage, for persistent headache. The theory is based on the fact that many sedentary patients are sufferers from retained intestinal contents in the large bowels, and though a movement occur daily, the dejecta are foul.

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The administration of a large enema will almost invariably bring away a large amount of contents, which have been retained, notwithstanding daily evacuations. The retained contents contain a great many microbes, which under favorable conditions, develop poisonous ptomaines, which play a most important role in the production of a variety of symptoms hitherto unknown, or little understood. At least a half gallon of warm water should be injected, and the bowels so manipulated as to favor a free distribution of the fluid over the entire intestinal tract. Sometimes two or three enemata will be necessary, before the matter is thoroughly removed. Such injections should be repeated once or twice per week. The putrefactive state of the intestinal canal is the prime cause of many serious ailments. The Hall treatment, if faithfully carried out, with a diet of fruits and cereals, will work wonders in increasing appetite, assimilation, and strength, not to speak of the unspeakable sense of physical well-being, sure to result. Keep clean inside and outside!

Another remedy for headache, and nervousness, especially that condition accompanied by insomnia, is fluid extract of piscidia erythrina (jam dogwood). The dose generally prescribed is from a half to a teaspoonful, in sweetened water, or whisky toddy. It is a remedy for almost any kind of pain; it exhilarates and stimulates the nervous system, and creates a feeling of warmth. Sulphate of codeine is also given for pain and restlessness in from one-half to two grain doses. It acts much the same as an opiate, being an alkaloid of opium, but unlike opium, it does not have the unpleasant after effect, such as checked secretions and constipated bowels. In rheumatic headache and pain, aspirin in five grain dose, increased if needed to ten or fifteen grain doses; salophen, and saloform in same quantities,are like salicylates, especially valuable remedies. Citrophen in doses of from eight to fifteen grains is very useful in purely neuralgic attacks. Also colchicum in rheumatic cases. The old time Dover powder in doses of from two and one-half to five grains, with suitable doses of quinine, have been long used in neuralgic, and inflammatory rheumatic troubles, when combined with alkaline treatment. For headache, again, there are numberless proprietary medicines for such complaint, such as lactophenin, antikamnia, colchi-sal pearls, phenalgin, chalgonia, ammonal, triphenin, chloretone, bromoform, saloform, and the iodides.

Hemicrania, or simple headache, confined to one side, and occupying the forehead, is the migraine—so named by the French. It is often periodical, and attended with nausea, coming on every day at about the same hour, and gradually wearing away. This is a neuralgic form of headache too, and in order to forestall such paroxysms, quinine given between such recurring attacks, will generally effect a cure. The cause of such attacks must be attributed to a malarial toxemia. Liquor potassii arsenitis in five drop doses, three times a day, with the addition of some ferruginous preparation, is of inestimable service in headache in pale and anemic patients.

Nearly all diseases, the result of morbid secretions, particularly such as involve a morbid state of the digestive apparatus, are attended by headache; and the most efficient means of dissipating such headaches, is by a course of active medication, neutralizing acidity, arresting putrefactive and fermentative conditions in the stomach and bowels, at the same time complelely clearing out all offending matter from the alimentary canal. After such treatment, if headache persist, appropriate quieting or anodyne medicines should be employed. The first and most important move is to endeavor to ascertain the cause of the headache, and a remedy will be found to cure.

Lawrence (*Jour. Am. Med. Assn.*) reports a case of ectopic pregnancy occurring twice in the same patient within 14 months. She was 26 years old; was operated on first for a left tubal pregnancy, the right tube being left. 14 months later was operated for ruptured tubal pregnancy on right side.

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Society Proceedings.

[Reported by E. A. Forbes.]

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated meeting, Friday, December 18, 1903, with Dr. Ben Carlos Frazier, President, in the chair.

APPENDICITIS.

DR. H. HORACE GRANT: I exhibit this appendix removed to-day, which has one or two special points of interest. It was removed from a boy seven years of age who was under the care of Dr. Hendon, who assisted me in the operation. He saw him a week ago Tuesday and brought him to the infirmary that night. He had been sick for two days. I saw him about ten o'clock that night and we could have operated on him then if we had been certain about the diagnosis. Tenderness was as great on the left side as on the right, the abdomen was distended, he had been vomiting and his temperature was 104 in the morning of that day; it had gone down to 100, however by night. We thought from the history it might be a case of ptomaine poisoning and decided to wait until morning. He was better the next day and continued to improve after this with slight temperature and a quiet pulse. His pulse came down under 70, which disturbed me a little as it was too slow. After a week's improvement his temperature went up to 102 on yesterday but down again that night. We operated this morning. His abdomen was distended and almost half a gallon of fluid ran out. The appendix reached down to the bottom of the pelvis, lying across the external iliac artery, and the colon was drawn down against the artery. I made a free incision because it was difficult to tell what I felt. Once exposed, I could trace the appendix and found it was doubled back upon itself, and there was an opening near the top with a concretion about the size of a small bean. In loosening the appendix I could see a little pus, but further exploration released about half a teacupful which came from behind the peritoneum, apparently very close to the rectum. After I removed the appendix and had my finger in the wound, I searched for some means of draining other than through the peritoneal cavity but on either side was a bony wall. We put in packing and made a coffer dam and put a gauze drain in. The opening in the abscess was not large enough to admit my finger and the abscess was post-peritoneal. We partially closed up the wound and left a layer of gauze all around it.

The most important point to me was this: Two months ago I saw a young man at nine o'clock at night with a history of an attack that day, and I operated that night, finding the same condition as described in this case but no pus. The appendix was in the same position, removed, and the end of the story, the patient got well at once. But the boy then formed an abscess which has necessitated drainage through the peritoneal cavity and he is in considerable danger of possible infection of the peritoneum. It shows the importance of prompt removal of an appendix beginning to be diseased, rather than to wait for the interval. There was no excuse for the delay other than the uncertainty as to diagnosis.

One other point: I have noticed in some articles on the subject and also heard discussed in conversation, the advisability of making a blood count in these cases to determine leucocytosis. I believe this a wise plan under certain circumstances. It helps to determine the existence of suppuration, and may at times decide a delicate point of operative interference in patient's apparent improving. I have not had much opportunity to employ the help but as I believe its aid has not been fully appreciated in this circle I mention it to employ this suggestion.

DISCUSSION.

DR. AP M. VANCE: I have always carried out the practice of examining such cases per rectum. I have often had the balance turned by getting the tip of my finger high up and getting sufficient tenderness to warrant the diagnosis. I have had no experience with the blood count but look on it rather as a fad. I think Dr. Grant was too cautious in not operating at first. What else could it have been

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in a boy eight years of age? An exploratory operation would have been justifiable. The pain in left side is not infrequent in appendicitis.

DR. W. O .ROBERTS: It is not uncommon to meet cases where there is as much pain on the left side as on the right. I operated on one not long ago between attacks with that condition, but the appendix differed in that it extended almost across to the left side. I believe, with Drs. Grant and Vance, that an exploratory operation would have been justifiable. I have never met with the condiiton of effusion in the peritoneal cavity without peritonitis, and I think it was probably due to pressure on the vein. Post-peritoneal abscess is not uncommon following appendicitis. I have heard a good many speak of having trouble with them. I believe the blood count is a good idea.

DR. F. C. WILSON: I recall a case where Dr. Vance wanted to wait until the next morning, and I insisted upon his not waiting. The temperature had risen one degree while we were there. The result justified the opinion based upon the rise in temperature, and in gangrenous spots that would have ruptured before morning. I belive temperature is a valuable guide.

DR. LOUIS FRANK: I believe Dr. Grant's difficulties were due to the location of the appendix and the formation of the abscess. I believe this boy did have a primary peritonitis, because I feel sure it is the inflammation of the peritoneum that gives rise to the symptoms of appendicitis. It is the localized peritonitis that gives rise to the manifestations we have. If we can exclude the involvement of the peritoneum, we would have none of the classical symptoms. I think Dr. Vance's point is a very good one and I have been able to verify it. This palpation is especially valuable in the male.

As to pain, I think it is not uncommon to have pain outside of the right iliac fossa, just as in pericholecystitis. If the appendix is adherent towards the median line we are very apt to have pain in the opposite side, but palpation of this side will refer the pain back to the right side. The location of the abscess is a very interesting point. Rupture of the appendix post-peritoneally gives rise to many difficulties. The use of the cigarette drain and packing would obviate any danger of general infection.

I recently saw a case in which it was most difficult to make a diagnosis. It was also a post-peritoneal suppuration, with the appendix behind the cecum. Pus had already formed in this region. In that case there was no tenderness in the iliac region at all but it was in the kidney region. There was never more than half a degree of temperature until the seventh day. We cannot always find typical cases of appendicitis, for it simulates almost every form of abdominal disease we have.

As to leucocytosis, I feel sure there is not much in it. If we depend upon this as a symptom upon which to base our diagnosis and operation, we will make many mistakes. In a recent article on typhoid perforation, some Montreal gentleman, Armstrong, has I think, positively shown this. Leucocytosis is found in many conditions and may mislead us. I have made a few blood counts but have kept no accurate data. I believe the sphigmamanometer is more valuable as indicating beginning peritonitis.

DR. GRANT (closing): As for the pain, I was not exactly misled by it, but with the temperature and history, I felt that he might have been eating something, with colic and ptomaine poisoning as a result. I operated today in the interval on a young man who had had two attacks, in neither of which I saw him. He referred all pain to a point just above the iliac bone on the right side. Pressure there gave him more or less relief, but the tenderness was all in the region of the appendix. I think the point of pain is not a guide, but the point of tenderness is a very important guide.

In regard to the leucocytosis, it is of value only in cases which have gone on, and the surgeon is waiting for the interval. If this gives evidence of pus, it is not wise to wait as long as we might otherwise do. The value of leucocytosis in beginning attacks is nil.

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The recent reports I have read have led me to believe that men of experience have found this examination quite valuable, and I thought we had perhaps overlooked it here.

As to temperature and pulse, they are very unreliable in the early stages of appendicitis. The most important guides to me are the presence of some temperature, localized tenderness and intestinal paresis and vomiting. If there is no vomiting or tenderness, I question the diagnosis.

STRYCHNIA POISONING.

DR. FRANK SIMPSON: I want to report the case of a lady, 34 years old, married seven years but never pregnant. While on a trip to Chicago she began to menstruate, returning here on the third day after, with a great deal of pain and the menstrual period ran up to ten days. The menstrual flow ceased, except for a little seepage, and she seemed to be in her usual health. That was August 10th. On the 17th I was called to see her about 8:30 p.m. and found her in practical collapse, a great deal of pain in the arms and calves of the legs, and spasm of the muscles. She said that at 6:30 she had taken a grain of calomel because she had felt badly all day. I gave her a hypodermic of morphine and atropia and in two or three hours she was quiet but still had the muscular contractions. I found her exhausted the next day but she got up in two or three days. On the 24th I was called to see her about 10:30 in practically the same condition as before. She had great apprehension of impending death. Her pulse was a little quick but regular and with a little tension. She said she had taken a grain of calomel. The box was shown me and it had marked on it "one grain of strychnia." There were no more tablets in the box. She said the tablets had been given her by her brother-in-law in Biloxi. I had no opportunity of investigating further but was very much inclined to think it a case of strychnine poisoning. I gave her morphine and atropia and stayed with her three or four hours. She was longer in coming from the effects and the next day was almost in collapse.

She menstruated in September about the regular time but had a great deal of pain and it ran about ten days. I did not suspect her of being pregnant but on October 8th, I was called to see her with pain over the abdomen, but in the meantime she had taken no more calomel. On the 8th I examined her and found her threatened with abortion and on the 10th she was delivered of twins at about three and a half months.

Was this strychnine poisoning, or a peculiar condition resulting from pregnancy?

DISCUSSION.

DR. JOHN G. CECIL: I am sorry Dr. Simpson did not have an opportunity to analyze those tablets. I should be inclined to think she got a large dose of strychnine. It would seem, however, that one grain of strychnine would have caused more serious trouble. The symptoms recounted are those of strychnine poisoning rather than those of gestation.

DR. AP M. VANCE: The woman's pregnancy might have been something out of the ordinary, she never having been pregnant before. One of the twins might have been in a cornua of the uterus and this collapse might have been brought on by the escape of something into the cavity. The strychnine theory seems to be borne out by the symptoms but I have never heard of a grain of strychnine being put up in one tablet. One tenth is the largest I have had any experience with. I have seen some cases of cornual pregnancy with disturbances like those of extra-uterine pregnancy and possibly there may have been something of this kind present.

DR. SIMPSON (closing): I am like Dr. Cecil. The symptoms were those of strychnine poisoning and when I first saw her I thought possibly it was a hysterical condition and did not investigate the tablets but the second time it flashed across my mind to see what these tablets were. She never had a recurrence of these attacks after taking the two tablets. There was about the same interval between the taking of each tablet and the appearance of the symptoms. She had never paid any attention to the box.

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THE LOUISVILLE SURGICAL SOCIETY.

Stated Meeting, January 4, 1904.

The essay was read by Dr. W. R. Blue: "The Sarcomata." See page 371.

DISCUSSION.

DR. I. N. BLOOM: I may say that I expct to work up this subject from the various text-books but a large and lucrative practice compelled me to forego that intention. I might state further that I have treated 150 cases medically without a single death, but unfortunately, truth compels me to state that I have never operated on sarcoma of the testicle and am delighted with the essayiest's paper. My experience with sarcoma has been with sarcoma of the skin and I have seen altogether about seven cases. Of these two were surgical and one was seen as consultant to Dr. Roberts. All the others were sarcomata cutis. One was a pigment sarcoma with two or three perfectly blue small sarcomata of the face. The blue tumors were unique and the case went on to death. The man was a brave fellow and wanted to know how long he would live and I lied and told him five or six years, and he died in six months. All of these cases died from metastatic abscesses.

I have seen but one true carcinoma cutis and that was in the practice of Dr. Yandell. I do not what became of him.

I think the Doctor may take rather a Utopian view of sarcoma in general. I believe what he says is true of the testicle and his experience is borne out by the testimony of other good operators. I agree with him that the earlier these cases are operated upon the better, but there will be few surgeons who will be as skillful and as lucky in failure to report recurrences. It will be interesting to prove that as long as the cells are retained in the connective tissue, metastasis will not occur.

The case I report is that of an engineer operated on at Norton Infirmary with what seemed to be two epitheliomata of the cheek. One was about the size of a dime and the other of a quarter, separated by a portion of intervening healthy tissue, perhaps an inch across. It differed in no respect from 75 epitheliomata I have treated on the body. I used the curette and paste and the larger one healed perfectly. The smaller continued to heal and the patient left the infirmary; it showed a tendency to enlarge and he left home. He traveled to other cities but ultimately came back to Louisville and was for a time at the University Hospital, where it was reported that he had developed a sarcoma at the site of the smallerulcer, of which he died.

I hope the Utopian ideas of the speaker will prevail and that the percentage of recoveries will grow larger. It is an important observation that the other testicle enlarges.

DR. H. H. KOEHLER: Personally I know very little about sarcomata and I think no one knows much about them. A number of different conditions are classified under that head. My experience is limited, being confined to sarcoma of the skin and a few other cases. The discussion as to whether malignant conditions are due to an infecting organism is still going on but I think the arguments are against it. Recently I saw an article reporting a case where metastasis from a carcinoma of the pancreas was found in another tissue, exhibiting a reproduction of pancreatic tissue and the formation of trypsin.

Under the head of sarcoid tumors of the skin we have a number of varieties. The so-called benign sarcomata are probably not sarcomata at all. Then we have the multiple sarcomata, of the Koposi type, and several other varieties. The whole subject is very much confused.

As to the treatment, I think Coley's treatment is being used less and less. The X-ray does not hold out much hope. I have had one case which rapidly proved fatal in a few weeks. I am willing to say that the X-ray produces a dispersion of the virus wherever possible. I am very chary about using it on sarcoma and carcinoma.

I think early and prompt excision is the chief thing. These benign tumors may go on for years. There is one case

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in this city I reported, in which the diagnosis was confirmed by Dr. Johnson, of New York City, as fibro-sarcoma. These cases are very benign and may exist for years.

Arsenic is much lauded n the treatment of the multiple types.

Dr. Ap M. Vance: I have operated on many cases of sarcoma in my time and my experience bears out the etatement that early operation of sarcoma of the testicle is more favorable. I can recall two cases of sarcoma of the testicle I operated upon after the disease had progressed extensively. One was in a boy of 17 and was interesting from the fact that the recurrence after the removal of the right testicle occurred in the penis and produced a prispism and he died of exhaustion. The other was in a man of 40 with the right testicle removed and in six months he had the largest liver I ever saw, and died of metastasis.

I have seen some cases in other parts of the body of twenty years' standing but many of them have died quickly. I know of no treatment except to cut them out early. The multiple growths have been very interesting to me. One case diagnosed pigmentated sarcoma on the inner side of the knee, which I removed; six months afterward the tumor recurred in the groin and she died suddenly in Chicago in the hands of a quack.

Another was back of the malleolus, about the size of a dollar, pigmented, and was diagnosed as carcinoma. I removed this and for three years she was free from recurrence; then it recurred in the groin and she went along for a year and a half and a similar growth occurred in the other groin. I referred her to Dr. Butler and she has improved some, the tumor lessening in size.

I think Dr. Blue is right in advising early operation. The greatest difficulty is in making the diagnosis. I do not think three weeks of antisyphilitic treatment would decide it. The only way to tell is to cut it out and give it to the best microscopist, and sometimes they make mistakes.

Both of the pigmentated cases occurred in women of the same age. One was diagnosed positively as sarcoma and the other positively as carcinoma.

Dr. J. Garland Sherrill: I have had a lot of experience with sarcoma but none with sarcoma of the testicle. My reading leids me to believe that Dr. Blue is to be congratulated on his results because the majority of cases do not do so well. Dr. Coley told me he had never managed to get a cure by castration, though he does it as promptly as he makes the diagnosis.

I am inclined to agree with the essayist thatt as long as the cells are retained in the capsule there is little likelihood of metastasis and there is some chance of getting a cure. But I do not believe the outlook is as hopeful as he states it. My experience is that the majority of cases of sarcoma do recur. We do have a giant cell sarcoma which involves the lower jaw, grows slowly and does not recur when removed. It was formerly known as recurrent fibroid tumor but proved to be sarcomatous. Slow-growing sarcomata of the fibroid type do not recur as rapidly as the round-celled.

I remember one case in a colored woman whose jaw I removed through the mouth. She had recurrence through the stump of the jaw and this was removed one year later. That was five years ago and the last time I saw her there was no recurrence. I have lost sight of her for over a year.

The question is an interesting one and I would advise removal of sarcoma as early as possible. I remember a case in an infant of three months, a sarcoma of the back of the neck. The child did not have anything of the kind at birth but a little nodule appeared soon after. At the end of the third month it was about the size of an almond. I removed it, thinking it was tubercular, but examination showed it to be a giant-celled sarcoma. Up to this time there had been no recurrence, but that does not mean anything. I have seen some forms of sarcoma which differed from others. We know that sarcoma in most parts of the body spreads through the blood-vessels and the lymphatic glands, which is especially true of the testes and parotid glands. These may be endotheliomata. In other localities I have been struck with the fact that sarcoma spreads

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by the lymphatic channels, which is particularly true of intestinal sarcomata. 22 cases of intestinal sarcomata are reported by Jopson and White which showed a metastasis through the lymphatics.

We find that carcinoma of the intestines spreads through the blood vessels and metastasis takes place through the liver more than elsewhere. I remember in the past year of seeing a case of sarcoma in a man of 50 who developed a tumor following an injury, in the pelvis, which grew very rapidly and covered almost half of the pelvis. It wasdeeply attached, yet I attempted its removal, diagnosing it as a possible sarcoma and operating in the hope that the diagnosis might be a mistake. I removed the mass successfully and found it to be an angio-sarcoma, apparently from the external vein. The patient did very nicely for a time and lived about two months, when the large cavity filled up with new tissue.

It has not been many years since tuberculosis and actinomycosis were classed under the head of malignant tumors, so I think we are making progress in the direction of differentiation. I must still incline to the idea of infection because my clinical work has shown this to be a probability.
paper is not confined strictly to sarcoma of the testicle, I may be permitted to say a few words concerning the melanotic variety of sarcoma. Pigmented skin sarcomata are characterized by their tendency to metastasic formations and by the frequency of their recurrence after removal. The same may be said of the sarcomatous choroidal growths. These tumors are sometimes seen very early with the ophthalmoscope and are often removed soon after the beginning of their development, yet recurrence takes place in the orbit. While speaking on intraorbital sarcomata I want to mention a feature regarding their development which has always been of interest to me, viz.: their slowness of development as long as the eye ball is not ruptured. After the sclera has been perforated development becomes very rapid as a rule. In consequence of this a clinical division has been made into the stage prior to the perforation of the sclera and that subsequent to it.

Dr. Thomas L. Butler: In regard to Dr. Blue's statement that the tumors should be removed early, there is no question. But I think the ground he takes as to the non-malignancy of these growths when seen early is hardly tenable. I believe all sarcomas are malignant, particularly sarcoma of the testicle, no matter of what variety of cell. All pathologists agree that the earlier they are removed, the less likely they are to recur, but I do not believe there must be a degeneration in the common meaning before metastasis can occur. Of course, sarcoma is subject to degeneration and this may happen very early, but these cells have an amoboid movement and can get into surrounding structures before degeneration takes place.

In reference to Dr. Blue's remarks about the two cases reported, the development following injury is an important point. Those of us who work for corporations get these cases resulting from injuries and clinical experience bears out the statement that they are often preceded by injuries.

In reference to the use of the X-rays, I am not yet satisfied what that treatment will do. I have been trying to recall the cases I have seen in the last eighteen months and I can remember the following cases, which I think were unquestionably sarcomata. The first was in a man of 50 with an ulcerated sarcoma of the jaw and treatment for six weeks reduced it greatly, but he rapidly developed metastasis.

The next case was sent by Dr. Roberts, which he took to be a sarcoma of the tonsil in a young woman of 30. In her case there was quite a tumor. She had been under my care about a year, with possibly slight improvement and there was no further improvement. I feel that we have done something for her.

The next case was a sarcoma of the neck, sent by Dr. Roberts. The original tumor had been removed, this being a recurrence. He was in bad health and suffering from marked dyspnea, with irregular heart. He was under treatment about three weeks with entire disappearance of the tu-

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mor; after going home he died in a few weeks, apparently from heart lesion.

Another case was in a man who had a very large, rapidly growing lympho-sarcoma. He was under treatment about a month without improvement.

Another case now under treatment is in a man about 60 years of age, from whom Dr. Vance removed a large gland three years ago, this being a recurrence. He has been under treatment for a month and the tumor has deminished greatly in size.

There are two other cases, apparently Hodgkin's disease, which is sometimes classed with sarcoma, both of which greatly improved. Both are still living and the improvement seems to be permanent, though in neither case was there entire disappearance.

Another case was a sarcoma of the breast, removed by Dr. Vance, with rapid recurrence; there was absolutely no benefit at all from X-ray, even no relief from pain. It grew rapidly until death. I have another case almost exactly like it, undergoing the same process, sent me by Dr. Vance.

As to the pigmented growth that occurred in the woman 50 years of age, reported by Dr. Vance, operated upon five years ago and followed by a mass in either groin, She was in my office to-day, but has not been under my care for the last three months. The enlargement in the right groin has entirely disappeared and much reduced in the left.

Dr. August Schachner: In regard to sarcoma, there is yet a great deal of unexplored territory and great diversity of opinion. There is great diversity in the classification and clinical aspects of the different varieties of sarcomata. My experience has been limited; it began with what was called a sarcoma of the testicle, which was removed eight years ago, and the man is in perfect health now. The tumor was as large as a cocoanut.

I recall a case of sarcoma of the breast in a mulatto, which was not followed up closely and there is room for questioning the diagnosis. The operation was done four years ago and when I saw her a year and a half ago she was all right. Another, in a mulatto about 60 years, was pronounced sarcoma but it had undergone degeneration but was encapsulated. Another was in a young girl who developed sarcoma; I took it out very carefully and had it examined and it was pronounced sarcoma. That was about four years ago and she is well.

Just before that I had a case of a young girl of 17, the picture of health, who came to me with a sarcoma about the ball of the thumb. There was considerable lymphatic enlargement in the axilla and I told her father the thing to do would be to amputate the entire upper extremity. He would only permit the removal of the thumb and cleaning out the axilla. She went home and returned in about three months with recurrence above the clavicle and the entire mammary gland was found enfiltrated with this substance. She died in about six weeks.

Our knowledge of sarcoma is very limited. In most of these cases there is the history of an injury.

Dr. W. O. Roberts: I have had a tendency to recurrence depends upon the character of the growth. The small round-cell sarcoma and the melanotic variety are the most malignant that we have to deal with. The spindle-cell sarcoma are much less so. I can recall cases where these were removed early and did not recur. The early removal of this type is much more apt to be followed by cure than the removal of cancer. Most sarcomata become disseminated through the circulation and not the lymphatics, but the skin types disseminate in both ways. Sarcoma of the testicle and the parotid will disseminate through the lymphatics and blood also. It is the same with the melanotic. I look upon sarcoma of the skin as the most malignant situation.

Dr. Blue (closing): My experience has been confined to sarcoma of the testicle. It was my pleasure on a visit East to spend a day with Dr. Simon Flexner at the University of Pennsylvania. I brought up the subject of sarcoma with him, and asked him if it were not possible that these growths could be removed earlier without metastasis resulting and he said "it was very likely."

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In recent genito-urinary treatise, the majority of the writers state that the prognosis is favorable.

As to the duration of testing them with anti-syphilitic treatment, I have treated a number of cases where the testicle was enlarged as a result of syphilis, and in one or two instances have seen them subside to almost normal after three weeks treatment.

I know very little about melanotic sarcomata of the eye.

The question now is, what is his trouble? He had gonorrhea eight years previously, but without history of frequent passage of blood. The case recalls to me one that I saw operated on at St. Peter's Hospital, London, by Dr. Fenwick in 1900, with a diagnosis of calculus at the bladder end of the ureter. A supra-pubic operation was performed, the stone removed and recovery resulted. I would like to know what to do for this man.

The operation in 1894 was for frequency in passing water, which was being passed every fifteen minutes. Dr. Counors suspected stone but failed to find it operating below.

At present there are no renal derivatives in the urine, but it is loaded with pus and triple phosphates. His prostate is slightly enlarged, and sensitive.

LOUISVILLE ACADEMY OF MEDICINE.

Regular meeting at Seelbach's Hotel, Wednesday, February 3, 1904, with Dr. Oscar E. Bloch presiding.

POPLITEAL ANEURISM.

DR. G. A. HENDON: This patient exhibits some unusual results in popliteal aneurism. About six weeks ago he came to me with pain about the ankle, which he thought to be due to an old sprain received two or three years ago. In examining his ankle joint, I inadverently passed my hand up his leg, slipped it into the popliteal space and felt all the evidences of a well defined aneurism, absolutely unmistakable, with all the classical symptoms present. I applied all the usual tests for diagnosing aneurism, informed him of the condition and advised that we do a ligation of the artery. Pending that operation, I applied a compress over the tumor, merely for protection. He wanted about a week to get ready for the operation and at the end of that time I changed the compress and found that the aneurism had ceased to pulsate entirely. That has been now about four or five weeks. He wore the compress but one week but there has been no return of the pulsation. He has a few superficial gangrenous spots on the bottom of his foot and one toe, confined entirely to the surface of the skin, and everything seems to be in good condition. I think I can now discover pulsation in the posterior tibial. He has suffered the usual symptoms, cold feet, tingling sensation, and so on. I kept him in the recumbent position as much as possible.

DR. J. B. BULLITT: It is a unique case from the standpoint of causation. There is no history of trauma to account for it. I think the mystery of its causation is only equaled by the ease with which it was relieved. If we did not know Dr. Hendon's character as a gentleman of integrity and the patient did not have evidence of circulatory disturbances in the foot, we would think he had been dreaming. The result will bear out the contention Dr. Sherrill made some years ago, who stated that he had had a very successful experience in the treatment of an aneurism with a tourniquet. It is a unique case in that line. Evidently the pressure was sufficient to permit clot formation in the sac and that is a point in favor of Dr. Sherrill's contention, that it would be wise to attempt pressure before proceeding to more radical measures.

PERFORATING ULCER OF THE TOE.

DR. J. T. WINDELL: About a year ago this man had a large corn on the bottom of his big toe, suppuration took place and when the corn sloughed out this ulcer was discovered. I have used every ordinary means of healing I know of except X-ray—iodoform, boric acid, permanganate of potash, every

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ments of every kind, but all have failed to relieve it. He has been treated by antiseptic powder and lotion, oint- Dr. Moren for posterior spinal sclerosis and this trouble which he has is a tropho-neurosis, probably the result of disease in the spinal cord. This condition begins as a callous, suppurates beneath and the sinus is the result. In the year in which this man has been under my care, I have probably removed a quarter of a pound of callous from that toe, without any appreciable change in the condition. At one time, after the application of a proprietary ointment, it looked as if it were going to heal up and then went back to the original condition. I have been able to find out but little on the subject, though I have consulted many authorities. Dr. Cutton states that it is due to syphilis or leprosy in most cases, but the French authorities say it is due to something else. As this gentleman is very active in his daily life, I have not been able to carry out the treatment of absolute quiet. I would be glad to have any suggestions from members of the Society. I have even tried the actual cautery. There is no diabetes in the case.

Dr Henry Enos Tuley: I have a patient under observation with a similar condition, a colored teamster. I think the same toe is involved, but in his case there is no spinal lesion. He has run the gamut of all the applications usually made and has finally come to the conclusion he can treat it just as well himself. At times it breaks down, even to the periosteum, and then heal up and show a little crater like this.

Dr. F. T. Fort: I have not studied the etiology of this condition, but I would feel justified in cutting down on it and curetting. If I did not get results within a year, I would suggest amputation.

Dr. J. B. Bullitt: I have seen a toe like this which was not due to the same cause, as the man did not have the same disease and no specific history. He was diabetic, however, one of the fat kind, and the sugar in his urine disappears under proper diet. The ulcer is in the same place but does not have exactly the same appearance. It went down half-way and then spread out. I tried curetting it and everything else; it finally healed up and about that time the joint developed an arthritis. There seemed to have been an infection of the joint and an incision was made with a discharge of pus. The joint healed up and then it broke out below. He is now treating it himself with about as good results.

Dr G. A. Hendon: I can recall about three of these cases, one in a diabetic. I treated this man as best I could and he came to me one day and said he had cured his ulcer himself with fresh raccoon grease. It did not stay cured very long.

I saw another case in 1895 and met him again about a year ago in the City Hospital and he had had the toe amputated and a similar ulcer had recurred on the middle of ball of the foot. It had been discharging for some time and I excised the metatarsal bone after taking out the diseased tissue, and brought the bones together; but it never did heal.

The other ulcer was the result of a gunshot wound which passed through the hollow of the foot. The wound healed up entirely and then the ulcer developed.

Dr. G. A. Hendon: This is a urethral calculus removed from the prostatic urethra. The man had all the evidences of stricture, with a slight discharge from the meatus. The supposition was that it was an old stricture but when I introduced the sound it clicked against this stone. The case looked exactly like an old gleet and stricture.

PARAFFINE INJECTION OF THE NOSE.

Dr. W. B. Pusey: This boy shows the result of paraffine injection of the nose. The first injection was made seven weeks ago and the second was two weeks after the first. He had no cartilaginous septum at all. About a week after I thought the case was doing all right, the wound began to suppurate, the result of infection from the tear duct. It is going to leave him with a great deal of cicatrical tissue. There is still a lump of paraffine in situ.

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DISCUSSION.

DR. J. GARLAND SHERRILL: The injection of paraffine is one of the topics now prominently before the profession. In the first injection Dr. Pusey seems to have gotten fairly good results and the second would doubtless have been successful but for the complication of infection through the tear duct. I have had no experience with this work and am glad to see that it offers something to these patients.

ATROPHY OF TESTICLES FOLLOWING MUMPS.

DR. J. T. WINDELL: Last spring this young man had mumps on both sides and failed to take good care of himself and had inflammation of both testicles, resulting in atrophy of both. He consulted me on account of severe neuralgia of these glands, which I have been able to relieve somewhat by the application of guaiacol. I have made one examination of his semen. He is able to copulate but there are no spermatozoa in the semen at all. It is a case of aspermatism. His testicles are exceedingly tender. We have authority for the removal of these organs for such conditions as this and I have brought him here to get the opinion of the members of the Society. He does not want them removed but if he keeps on suffering, it might be advisable. He pours out the normal amount of fluid in copulation. He is twenty years of age, unmarried. His pain is probably due to the involvement of some of the nerves.

DISCUSSION.

DR. W. R. BLUE: The case is one of interest and I am glad to see it. It is remarkable the number of reflexes that occur with varicoceles, which this young man undoubtedly has on the left side. The absence of spermatozoa in the semen would hardly be sufficient to justify castration. I would suggest the modified Bennet varicocele operation first and if that relieves the pain, the size of the testicle would be increased. If the right testicle continues to pain him, I would leave the testicle and do a vasectomy. I would give him every chance before doing a castration.

DR. F. T. FORT: I agree with Dr. Blue. A trial of vasectomy should be made to relieve the condition. Varicocele produces a great amount of pain in many instances and a large varicocele is often relieved by simple suspension. I believe an operation on the left side might ameliorate the pain on that side. If all other methods fail, then castration might be considered.

DR. J. GARLAND SHERRILL: The most important question to my mind is the cause of this pain. It is due to the varicocele on the left side or to obstruction of the vas deferens, causing a retention of the secretion. It strikes me that if it is due to the trouble he has had, it is due to obstruction in the epididymis. How is the lack of secretion to be accounted for? There is either an obstruction of the ducts or a lack of secretion from lack of blood supply, yet the left testicle has too much blood supply. I believe that the inflammation is caused from the matting down of the epididymis at the time of the inflammation. If this is the case, simple incision of the capsule of the testicle would relieve the condition by relieving the tension, and should be attempted before castration, which should be the last resort. I would not take one examination of his semen as conclusive evidence of the lack of spermatozoa, but repeated examinations should be made. I do not see how vasectomy would relieve the pain. The pain might be increased by obstructing the vas. I think retention is the probable cause of the pain.

DR. JOHN J. MOREN: I would like to try electricity on this young man.

DR. WM. A. JENKINS: My experience has been limited to one case, occurring in connection with a bosom friend of mine. He had exactly this condition following mumps. He had these intense neuralgic pains but they disappeared in two weeks; he has been troubled ever since with a gleety discharge. The testicles are smaller and a little tender on handling but he says he experiences as much pleasure as ever in intercourse. I am satisfied he is sterile, though he has never consented to an examination of his semen.

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I should certainly leave castration as the very last resort, for it often has a profound effect on the mental status of the patient.

DR. WINDELL (closing): I do not think he has any constriction of the vas or any occlusion of the lumen, because inflammation of the testicle usually involves the testicles proper and not the epididymis. I have seen quite a number of men with atrophy of one testicle following mumps. This boy's pain being relieved by guaiacol and the fact that his semen is in such condition — containing epithelium and glandular globules, showing that it comes from the testicles—leads me to think that the vasa deferentia are still patulous.

As to the pain, I am unable to explain it unless it is simple neuralgia, which at times occurs in healthy testicles. I intended bringing another young man with neuralgia who has perfectly healthy testicles. I will be glad to have Dr. Moren try the effect of electricity.

REPORT OF CASES.

DR. HUGH N. LEAVELL: I might make a further report of the case of cholecystectomy reported at the last meeting. The patient remained in the infirmary five weeks and went home able to eat anything. We even tried cabbage and turnips and she stood the test. The incision has healed perfectly and the intense jaundice entirely cleared up.

Current Literature.

Neugebauer, Warsaw: Pseudo-Hermaphroditism.—(*Interstate Medical Journal*, February, 1904.)

The author points out the frequency with which surgeons make mistaken diagnoses of sex in these cases. Many a supposed girl has been operated on for a hernia that in reality proved to be merely the delayed descent of the testicle. Similarly other operative mistakes have been made. The author, therefore, warns against any radical measures before sex has been determined.

The necessity of such a warning is well illustrated by Dr. Goffe's case, published in the December number of the *American Journal of Obstetrics.* The patient had been raised as a girl, and according to the surgeon the "female characteristics predominated." If one is to judge by the description and illustrations of the case, it is hard to see how Dr. Goffe arrives at this opinion. The possibility, nay, even the probability of a male hypospadias with undescended testicles seems the more rational conclusion. At any rate, the sex was uncertain, as Dr. Goffe himself admitted. The patient had an organ resembling a penis and beneath it an opening like that of an atrophic vagina. She was asked whether she wished to be made like a man or a woman. To this she answered "a woman" and the surgeon thereupon amputated the penis and enlarged the vaginal opening.

While we will not deny the possibility that the individual in this case may have *guessed* her true sex, the principle of allowing our patients to decide such questions is bound to lead to serious consequences. A case in point is that of Berendes-Landau, quoted by Neugebauer, where several years after a plastic operation similar to Goffe's, the patient was found to be a man. Hence Neugebauer argues justly the advisibility of a diagnostic laparotomy. Five such operations have already been made. The procedure under modern asepsis is practically harmless and since the future happiness of the individual may depend greatly upon it, is certainly justifiable.

In a new series of six cases just published (*Centralblatt fuer Gynaekologie,* January 16, 1904), Neugebauer shows how in three of them only a laparotomy served to settle finally the true sex of the individual. On principle, therefore, we must shun all such plastic operations as Dr. Goffe performed until every means of ascertaining the true sex of the individual has been exhausted.—(Editorial *Interstate Medical Journal.*)

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EDITORIAL STAFF.

JOS. M. MATHEWS, M.D., LL.D.
A. M. CARTLEDGE, M.D.
H. HORACE GRANT, A.M., M.D., BUSINESS EDITOR.
HENRY ENOS TULEY, A.B., M.D., ACTING EDITOR.

THE VALUE OF THE PHYSICIAN'S SERVICES.

The charge to be made for professional services will necessarily vary with a number of different conditions. This proposition is recognized in the practice of the law, and it should be equally so in that of medicine. Occasionally a judge on the bench may decide differently, but a moment's reflection will show the error of such a decision. There are to be taken into account especially the nature of the case, the character of the treatment to be pursued, the time consumed, the skill of the physician, and also the station—public and private—of the patient. The physician is, by force of circumstances, compelled to have a varying fee even for similar service. He can not elect to treat only the rich; neither can he afford to treat only the poor. He gives much of his service gratuitously, so that none is deprived of the opportunities for relief afforded by his skill and ability. For these reasons the physician's fee can not be a fixed and inflexible one. This would seem to be the view held by Judge Ashman of Philadelphia, as expressed recently in a decision rendered in the Orphans' Court: "The life of a rich man," he said, "is worth more than the life of a poor man, and the physician has a right to charge the millionaire more for his services than he does the laborer.....The physician is unlike the merchant, who has goods of different quality to sell at various prices. He must give his best service in every case. But it does not follow that the service is worth the same in every case. ....Human life has a pecuniary value of variable quantity, greater in the millionaire than in the laborer. Thus, the practitioner of common sense has a maximum and a minimum charge and makes out his bills to suit the pecuniary circumstances of the patient." —*Journal American Medical Association.*

THE PROFESSION OF NEW YORK.

The news that the profession of New York State will soon be united will be received with pleasure by the profession of the country. For twenty-two years the profession has been divided into the New York State Medical Association and the Medical Society of the State of New York, the membership of only one eligible to the American Medical Association. This has led to great confusion, often to much bitterness.

At the last meeting of the Medical Society of the State of New York, Dr. A. Jacobi, with a ringing address as a preamble offered a resolution empowering the consolidation committee to do whatever is necessary to bring the agreements between the two societies into effect. This resolution was enthusiastically adopted.

The re-organization will be in accordance with the American Medical Association's plans, under the name of the Medical Society of the State of New York; its seal will be preserved; a House of Delegates of 150 is provided for, and we trust everything is all that could be wished for.

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DEPARTMENT OF COMMERCE AND LABOR.

Among the provisions of an Act of Congress establishing the Bureau of Standards, the Bureau is authorized to test clinical thermometers used in medicine, surgery and pharmacology.

The results of the investigations by the Bureau, looking into the destructibility of index, time of action, difficulty of throwing back index, effect of aging, nature of glass used. etc., showed a lack of uniformity of standards in thermometers made by different manufacturers of the country. A comparison of the scales used by the makers showed a discrepancy of about 0.2 degrees Fahrenheit high, and an agreement has been reached whereby the "international hydrogen scale" will be used by all makers.

There is no reason why the profession should not demand thermometers bearing the seal of the government as to age, accuracy, etc.

Special Article.

TYPHOID PERFORATION.

It is only necessary to make a cursory view of the medical and surgical literature of the day to be impressed with the importance of the proper treatment of intestinal perforations occurring as a complication of typhoid fever. The advances in therapeutics have robbed typhoid of many of its dangers until to-day under these improved methods of treatment, the mortality has been reduced to a little less than 10 per cent. Can this be lowered we ask ourselves? We think yes, in view of the fact that about 3 per cent. of all cases die of perforation. This means one-third of all the deaths in this disease is from the peritonitis consequent upon the escape of intestinal contents. We believe that one-half of such deaths could be prevented by proper surgical intervention.

The greatest stimulus was given to the surgical complications of typhoid by the classical monograph of Prof. Keen who at the time his work was issued, (and one by the way which every practitioner should read) was able to collect only 83 cases upon which an operation had been done to save the life of the patient. Of these 83, 19.3 per cent. recovered.* One year later 47 more cases had been operated, and the death rate had diminished considerably as 28 per cent. got well. In September, 1903, the writer was able to collect 339 cases with 90 recoveries.

One may say that this is little improvement. True, but as answer to this we can say that formerly these 90 cases would all have died and that many of these cases were operated upon even late after the perforation had taken place.

This accident is one that is always present, that we can never foresee, that we can not avoid, one which is likely to occur in the very mildest case as in the severest and which is at the same time, if not recognized at once and properly handled, the most fatal of any complication or accident in the course of the disease. Without surgical aid recovery from such perforation is so rare that we may say it practically does not occur. Admitting this we must conclude that we should endeavor (1) to recognize the very earliest manifestations of this accident, i.e. to make an early and correct diagnosis, and having done so, (2) to give our patient the advantage of proper surgical assistance. Early recognition and proper surgical aid go hand in hand, the one without the other is use-

*The Surgical Complications and Sequelæ of Typhoid Fever, by W. W. Keen.

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less. Neither, however, should be difficult, and, in this day of surgery when good surgeons are found within a few hours distant from most all and every locality, there is hardly an excuse for not having the latter and we believe the former, that is, the early recognition, is within the possibilities of every practitioner if the proper interpretation is put upon the symptoms.

The symptom complex is due to the peritoneal insult and manifests itself as soon as this structure is involved. The important ones are pain and tenderness and rigidity.

Pain in the belly, especially in the right iliac region coming on suddenly or sharply during the course of typhoid, either in the first or consequent weeks, and not relieved after an enema or spontaneously in a very short time is a most grave symptom and one which usually means something. Should this be accompanied by tenderness in the same region and should there be rigidity, gradually extending over the abdomen, the diagnosis, even in the absence of all other symptoms, should be one of probable perforation. Many errors have arisen on account of the text book descriptions of the symptomatology in which is pictured so graphically and strikingly the symptom of shock as a necessary accompaniment of perforation. As some one has said, "These descriptions and symptoms are the best ever written of impending death and are not at all those of the perforation."

Shock is not a symptom in many cases. Shock comes on often too late, too late to do good by any form of treatment. Shock should not be awaited either before making a diagnosis nor as an indication for operation. On the other hand it is no bar nor is it always a contraindication to operation.

Of the other symptoms, pulse, temperature,vomiting, distention, tympany over the area of normal liver dullness and altered facial expression are all too inconstant and too variable to be depended upon. The three always present, the cardinal symptoms, the all sufficient indices, are pain, tenderness and rigidity, or, in the order of importance probably rigidity, pain, tenderness. The manifestation of any one of these during the course of the disease is cause to redouble or treble one's vigilance, making more often visits or remaining with the patient until satisfied as to the cause for its production, and at the same time we would get in touch with the surgeon, if necessary have him see the case in consultation, because we believe he is able to more readily recognize peritoneal damage than those not accustomed to deal with these structures, nor so familiar with their pathology.

Robert Morris recently expressed himself as believing that in every case of typhoid the physician should have a surgical consultant ready for just such emergencies. With such an arrangement the mortality should be greatly reduced and at least one-half of the cases now dying from this cause could and would be saved. It is largely on account of early recognition and prompt surgery even in doubtful cases that so many more are saved in hospital than in private practice, and this will to a certain extent always be true. Much can, however, be done in general practice if there is a thorough appreciation of the constant danger and the early symptoms and a proper understanding and relationship established between physician and surgeon.

A few words as to the surgical indications and technique. The best results are obtained in cases operated

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within the first twelve hours after rupture. Of cases operated upon within this period between 50 and 60 per cent. have recovered. The next most favorable period is within 24 hours, after 36 hours have elapsed most all cases will die operation or no operation.

The incision should be made in the right linea semilunaris, as the vast majority of perforations occur within the last 12 inches of the ilium.

After the abdomen is opened search at once for the cecum and read the distal 12 or 20 inches of the gut. When the perforation is found, waste no time trimming the ulcer or in fancy work, but close the opening either by a purse string suture or by a continuous right angle suture placed horizontally to the long axis of the gut. If only one opening is found it may be stitched to the parietal wound. Wash out the cavity rapidly and thoroughly with physiological saline solution and close the abdomen, after providing ample and abundant drainage.

If general anesthesia is feared use cocaine locally, but waste no time in fancy frills or surgical refinements. These latter are dangerous but even such are not as dangerous as delay in diagnosis.

In conclusion we would add the following summary of a paper recently read by the writer before the Mississippi Valley Medical Association.

1. Perforations are to be expected in about 2.5 per cent. of all cases of typhoid fever.

2. Prompt surgical intervention is the best and only logical treatment.

3. Early diagnosis is most desirable and will be the means of greatly reducing the mortality, as 55 to 60 per cent. would recover.

4. Diagnosis, sufficiently early to achieve these results, can only be made by careful watching, treating all cases as serious and a proper interpretation of the symptoms. At the first indication have the surgeon in consultation and be prepared to operate.

5. More cases die from delay than errors in surgical technique, therefore in doubtful cases, though a mistake may be made and no perforation found, operate.

6. No case, unless dying, is so desperate as to be beyond some hope of saving, so in operating be rapid, lose no time in fancy work or in surgical refinement and be sure to drain.

7. "Get into the belly quickly and get out more quickly."

LOUIS FRANK.

Notes.

Among the physicians who have opened offices in the new Weissinger-Gaulbert apartments, corner of Third and Broadway, are Drs. T. L. Butler, W. F. Boggess, James Vance, Jas. Chenoweth, J. Rowan Morrison, Meddis and T. D. Finck.

The regular meeting of the Jefferson County Medical Society was held in the parlors of the Galt House the afternoon and evening of February 16th, the regular banquet after the adjournment of the evening session being a very enjoyable function.

The following were the toasts: Medicine and the Cloth, Rev. J. Kinsey Smith; Medicine and the Bar, Hon. J. B. Baskin; Medicine and the Press, Hon. A. Y. Ford; "Our Profession the Best of All," Dr. Thos. Hunt Stucky.

The Alumni Association of the Louisville Medical College will hold its annual meeting in Louisville, March 24th and 25th. An interesting program has been arranged by the Secretary, Dr. Adolph O. Pfingst, and the meeting promises to be the largest in the history of the association.

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The next meeting of the Medical Society of the Missouri Valley will be held at Lincoln, Neb., March 24-25, 1904, under the presidency of Dr. A. D. Wilkinson, of Lincoln. Dr. Chas. Wood Fassett, of St. Joseph, Mo., is Secretary.

That "war-horse" editor, Dr. J. C. Culbertson, of the *Cincinnati Lancet-Clinic*, retired as an active editor of that publication with the first of the year. He has been succeeded by Dr. Mark A. Brown as editor, with a full corps of collaborators and department editors.

With the January issue of the *American Practitioner and News*, Drs. F. W. Samuel and A. D. Willmoth assumed editorial control, with Dr. S. B. Hays as Managing Editor. The November and December numbers were not issued. It is to be hoped that this publication, which has led a rather precarious existence in the past few years, appearing from two weeks to four months behind time, will take a new lease on life and live up to the reputation it once had in the old days. We predict a bright future for it under its present management, which from the editorial page is vested in the American Practitioner and News Publishing Company.

Messrs. E. B. Treat & Co. announce the consolidation of the *International Medical Magazine* and the *Archives of Pediatrics*, a discontinuation of the former publication.

The consolidated journal will be edited by Dr. Walter Lester Carr.

The Hotel Committee of the Atlantic City Committee of Arrangements for the June meeting of the American Medical Association has made the following selection of hotels.

General Headquarters, Marlborough House; Practice of Medicine, Hotel Traymore; Obstetrics and Diseases of Women, Hotel St. Charles; Surgery and Anatomy, Hadden Hall; Hygiene and Sanitary Science, Garden Hotel; Ophthalmology, Seaside House; Diseases of Children, Hotel Dennis; Stomatology, The Ilesworth; Nervous and Mental Diseases, The Brighton; Cutaneous Medicine and Surgery, The Shelburne; Laryngology and Otology, The Strand; Materia Medica, Young's Hotel; Pathology and Physiology, The Windsor.

The Vanderburgh County (Ind.) Medical Society held its regular meeting January 19, at the offices of Drs. Walker and Welborn, it being the tenth anniversary of the opening of the Evansville Sanitarium.

The meeting took the form of a reception, and was much enjoyed. An elegant lunch was served.

This society three years ago took into its membership all the Homeopaths and Electics, probably the first in the country to make so sweeping an action. The results have fully justified it. Think of a city of 75,000 inhabitants without a doctor's sign "Homopath" or or "Eclectic." Practically every physician in the county is a member of the regular organization.

The regular monthly meeting of the Bourbon County Medical Society was held at Paris, Ky., February 11, 1904. The following papers were read: Influenza, Dr. J. S. Wallingford; Bonefelon Treatment, Dr. D. B. Anderson; Experiences in Kentucky Mountains, Dr. W. G. Dailey.

The American Medico Psychological Association will hold its annual meeting in St. Louis, May 30 to June 3, under the presidency of Dr. A. E. Macdonald, of New York.

A full program has already been promised. Dr. C. B. Burr, of Flint, Mich., is Secretary.

The calamitous fire which swept the business section of Baltimore on Sunday and Monday, February 7 and 8, destroyed the February number of the *Maryland Medical Journal*—the Tuberculosis Exposition number—containing the valuable papers of Knopf, Flick, Adami, Ravenel, Thayer, Hoffman, Salmon, etc.

Through facilities afforded in Philadelphia, the forms of this issue are being reproduced from proofs on file outside the fire zone, and the February *Journal* were in the mails promptly.

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Book Reviews.

The Self-Cure of Consumption, Without Medicine. With a Chapter on the Prevention of Consumption and Other Diseases.

By Chas. H. Stanley Davis, M.D., Ph.D., Member of the Connecticut State Medical Society; Physician to the Curtis Home for Old Ladies and Children, etc., New York. E. B. Treat & Co. 1904.

The author's statement in his preface that "in New York City there are at least 20,000 people walking the streets each day affected by consumption,....and the death rate each year from consumption in New York State is over 13,000," is justification enough for the issuance of a book of this nature. He claims also that consumption "from its first beginnings to its last stages, before actual decay of the lungs takes place, can be cured in at least ninety-five per cent. of the cases."

He sums up the treatment in mentioning the resources at our command, hygienic, dietetic, hydropathic, and medicinal, the chief reliance being placed upon the scientific use of air, sunlight, water, food, rest, and exercise. He justly lays stress upon the range of the temperature as a guide for exercise. The remainder of the book is taken up with details of the treatment as outlined above. It is a book which can be well placed in the hands of the laity and should have a wide distribution.

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The Blues—Splanchnic Neurasthenia.

Causes and Cure.

By Albert Abrams, A.M., M.D., Consulting Physician, Denver National Hospital for Consumptives; the Mt. Zion and French Hospitals, San Francisco. 240 pages, $1.50. E. B. Treat & Co. New York.

The term "the blues" has heretofore not been considered as belonging to a pathologic entity, but in this volume the author has considered it from the view point of a nerve exhaustion, its origin being a congestion of the intra-abdominal veins.

Among the causes of the condition are given mal-hygienic clothing, occupation, disease and lack of exercise, and other evils traceable to enfeebled abdominal muscles.

The author writes entertainingly of the causation of this condition, and in the chapter upon its treatment he has gone into detail of the physical methods of treatment, abdominal massage and exercises, respiratory exercises, electricity, abdominal supporters and hydrotherapy.

The book is ingenious and practical as his theories are apparently borne out by citation of clinical cases of interest.

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The Practical Medicine Series of Year Books.

Under the general editorial charge of Gustavus P. Head, M.D. Vol. III., The Eye, Ear, Nose and Throat, edited by Casey A. Wood, M.D., Albert H. Andrews, M.D., and Gustavus P. Head, M.D. Chicago. The Year Book Publishers. 1903.

This volume maintains the reputation of the predecessors of this series for completeness and is a valuable addition.

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Social Diseases and Marriage.

By Prince A. Morrow, A.M., M.D., Emeritus Professor of Genito-Urinary Diseases in the University and Bellevue Hospital Medical College, Surgeon to the City Hospital, New York, etc. 1904. Lea Bros. & Co.

We consider this one of the most important books of the year. It strikes at one of the most serious problems which confronts the medical profession to-day, for it is to them the people must look for aid in the solution of these vexing problems of social hygiene. It is a new work in this field, which is occupied only by Fournier's treatise on *Syphilis and Marriage.*

The statement that "gonorrhea overshadows syphilis in importance as a social peril" is being more and more acknowledged by the profession, and the author's emphatic statements should make firmer this belief.

The reader naturally turns to the chapter on Social Prophylaxis, as the causes of and remedies for prostitution have baffled the ingenuity of the profession. It is indeed true that the male in the dissemination of venereal diseases is the chief malefactor, the essential cause for prostitution being masculine unchastity. This shows the futility of an attempt to regulate prostitution by directing the

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attempts only toward the woman. This problem of social prophylaxis is dealt with from all standpoints, and much stress is laid upon the possibilities of relief from educational measures, the necessity for education of young men in the knowledge of sexual hygiene, and the necessity for spreading this knowledge to the masses.

There seems to be no phase of the subject which has not been fully covered by the author. We commend the work most heartily.

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A Manual of Medicine.

Edited by W. H. Allchin, M.D., London, F.R.C.P., F.R.S.Ed., Senior Physician and Lecturer on Clinical Medicine, Westminister Hospital; Examiner in Medicine, Naval Medical Service, etc. Vol. V. Price $2.00. New York. The Macmillan Company. 1904.

The contributors to this volume are as follows: Bertram Abrahams, Jno. R. Bradford, Jno. H. Bryant, Sidney Coupland, A. Crombie, B. E. Dawson, R. Q. Heeb, Robt. Hutchison, W. L. Lazarus-Barlow, and Wm. H. White.

The subjects considered are diseases of the Digestive System and of the Liver; Diseases of the Peritoneum and of the Vessels of the Abdomen; Diseases of the Kidneys and Diseases of the Ductless Glands. The space devoted to the various subdivisions of these subjects is somewhat larger than in similar American works. It is thorough and complete and the series can well take the place of more pretentious works upon medicine

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Radium and Other Radio-active Substances.

By William J. Hammer, Consulting Electrical Engineer, New York City. New York: D. Van Nostrand Co. 1903.

This book is a "consideration of Radium, Polonium, Actinium and Thorium, including Phosphorescent and Fluorescent Substances, the Properties and Applications of Selenium and the Treatment of Disease by the Ultra-Violet Light."

Fluorescence and phosphorescence is described and discussed and Prof. Becquerel's experiments are recorded. It is stated that a preparation of radium, chemically pure, will shortly be put on the market by its discoverers, Professor and Mme. Curie, at the cost of $6,000 per gramme, or about $2,721,555.00 per pound!

Finsen's experiments with the ultra-violet light are recorded and a number of photographs published.

From a scientific standpoint the book is a valuable one.

* * *

The Medical News' Visiting List, for 1904. Lea Brothers & Co., Philadelphia.

This book is issued in four forms: Weekly, dated, for 30 patients; Monthly, for 120 patients a month; Perpetual, undated, for 30 patients a week per year; 60 patients weekly per year.

Among other features it contains this year a scheme of dentition, instructions for examining the urine, table of eruptive fevers, etc.

* * *

The prominent attention lately bestowed upon the domestic cat by fashionable society, and the great success of several cat shows, have induced Mr. John E. Diehl, the well known authority on domestic animals, to prepare a handy little volume under the title of "The Domestic Cat." It carefully describes the different breeds and varieties, and states how to keep and rear cats; how to recognize their various diseases and how to treat them. Price, 25 Cents.

We have received from the Associated Fanciers, 400 N. 3rd St., Philadelphia, Pa., a copy of their Dog Buyers' Guide. It contains a finely executed colored frontispiece; well drawn engravings of nearly every breed of dog, and all kinds of dog furnishing goods. We should judge that the book has cost a great deal more to produce than the price asked. Price, 15 Cents.

A copy of Mr. John E. Diehl's latest book on the Toy Dog has just been submitted to us for criticism. The author, who was recognized for years as an authority on domestic pets of all kinds, has evidently put his best efforts on his last production, so that this becomes almost invaluable to all who admire, or intend to provide themselves with a toy dog. Price, 25 Cents.

These books can be had of the Associated Fanciers, 400 North Third Street, Philadelphia, Pa., who offer to mail them to any address on receipt of the price.

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LOUISVILLE MONTHLY JOURNAL

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Original Communications.

THE PERINEUM.*

BY C. SKINNER, M.D.,
LOUISVILLE, KY.

In the presentation of this subject for your consideration tonight, I am well aware of its importance both to the general practitioner and specialist —not excepting the eye men who are often called upon for the relief of some obscure reflex headache, which is only cured after an old perineal tear has been successfully dealt with—and I trust that we may have discussion that will be of benefit to us all.

The essayist will waive the more minute anatomical and histological description of this important structure and speak generally of that "V"-shaped body bounded by the posterior vaginal wall in front, rectum behind, below by 1½ inches of skin between the opening of these two canals; having as its sides the tuber ischii.

This soft mass is composed of skin, elastic fiber, muscles and mucous membrane, being known to the obstetrician as the soft pelvic floor over which he, as a skilled and unskilled pilot, must see the oncoming fetal body pass with safety both as to life of child and the preservation of its continuity, and at this time his responsibility is at its highest; for in so doing, he must not retard its progress too long, not hasten too much, encourage uterine contractions and voluntary effort, keep back undue force, render maternal suffering nil, appease anxious husbands, grandmothers, mothers-in-law, maiden aunts (to be), numerous curious friends, and finally, with a clear conscience in good answering the direct question which may, and will, come from a variety of sources, "Doctor, was she torn much?" in the negative.

Good authorities state that in spite of all known precautions 20 per cent. of primipara receive some degree of tear; 15 per cent. even to the second or third degree. These figures are taken from well-kept hospital records, and I must say that it makes one less pessimistic when contemplating his own private experience after a series of disasters.

The importance of this subject cannot be overlooked when we consider its frequence and that long chain of pelvic disturbances which follow often even a slight tear—one that the unlucky accoucher considered of really no importance, but which has been made to appear as big as a barn door by his ethical friend who looks through a 1-12-inch objective at the work of others and sees his own "through a a glass darkly."

Causes—Passing over without remark, abnormal pelvic forms, certain positions and presentations, experience teaches us the majority of tears are due either to too precipitate deliveries or unyielding perineii.

This body which is capable of dilation to a great degree, must yield to the advancing fetus in a normal way or rupture; and when time enough has not elapsed for sufficient dilation to take place and the vulvo-vaginal rim is about to succumb to this pressure, art and science must step in to interfere by one of two processes.

First, lessen the power from behind by discouraging voluntary effort on the part of the mother during labor pains,

* Read before the Louisville Medico-Chirurgical Society, February 5, 1904.

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placing the woman on her side or by means of a general anesthetic.

It is a well-recognized custom in this country to keep the mother on her back with a helper on either side supporting the knees, while at the same time pulling upon the hands, thereby enormously increasing the pressure upon the fetus. Some genius is now advertising his obstetrical harness, with recommendations from mothers, nurses and doctors, who are a unit in pronouncing it a woman's friend and comforter—yet, not having tried it, I would think, in the language of our Western friend, we may call it a "perinealbuster."

We must admit, however, that to forego all of these aids takes a deal of moral courage when one has spent the entire night waiting for the completion of this, the second, stage of labor, but it is just the rock upon which so many of our promising cases are wrecked, and a few moments of undue haste is followed by self-reproach and "our winter of discontent" is made glorious summer to that professional neighbor who gets the opportunity later of the work well begun but poorly done.

Secondly—When a tear seems to be inevitable in spite of the above precautions, one must remember that, with properly applied force from without, this dilating body may be most effectually supported and the direction of force from above so deflected as to, in many cases, prevent this accident, in part, if not entirely.

Every writer upon this subject seems to have some theory and practice of his own, but all get the same results in practically the same way. What matters it whether we make this pressure with the palm of the hand, thumb and fingers, fingers and thumb, if the presenting part is kept well up under the symphisis, throwing the weight from the vulvo-vaginal border, and the direction of force is upward and forward instead of downward through the perineal body.

In forceps cases it is a good rule after bringing the presenting part down upon the perineum, to remove the blades just before the largest diameter passes the vulvo-vaginal ring. It must not be forgotten that every fraction of an inch may become a factor in this process, and by little things we are able to save the day. While it has fallen to the lot of the essayist to deliver a few babies in his experience of some years, he is forced to plead guilty to a few perineal tears, and in not a few could look back to some neglect of precautions that would have served him well.

Episitomy, I have never resorted to from the simple reason that I cannot think that in these extreme cases a section of this tense border in two places could or would prevent this disaster. I would be obliged if the members would develop this point in their discussion.

Treatment of torn perineii consists in suturing the wound at once in a most thorough manner, using preferably silk for the reason that better coaptation can be gotten and a wider space embraced, entering the needle at least one-half inch from the edge of the wound and making the point of exit the same. Hemorrhage is rarely troublesome, but all clots must be removed from the wound, since they prevent coaptation and are sure to become infected. There is no better time for a repair than the first few hours after the delivery, and when carefully done, with proper after care, union is the rule.

To sum up the matter, perineal tears are not desirable in that they do give trouble to the young mother, often cause the medical attendant to be unjustly criticised, chiefly by the laity, and if unsuccessfully repaired primarily, will be an additional expense.

DISCUSSION.

DR. F. C. WILSON: We are all liable to meet with perineal tears, especially when it is necessary to use instruments. As a rule, instruments should be removed before delivery is completed. It is difficult to know just when to remove them, however. In cases of occiput vertex presentation. I have always been very careful to release the vertex as soon as possible from under the pubes, relieving the tension by lifting up the head. The essayist might also have touched upon laceration of the cervix, which is often overlooked. Care-

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ful examination should be made at the time of labor. If either the perineum or cervix is damaged it should be repaired at once.

DR. AP M. VANCE: I think if some of Dr. Skinner's suggestions were carried out, among the younger doctors especially, we surgeons would not have so many after conditions to repair. I have had two cases in consultation lately which prove that the bane is not to wait long enough. I was called in by a doctor who had delivered his wife and torn her. I found the woman well developed, but torn from A to izzard, and I got this history: He got home at 2 A. M. from another case and found his wife in pains. At 4 o'clock he put on forceps and delivered her. This tear was the result. I repaired it and she made an excellent recovery. This was not only a rupture of the perineum, but of the vagina as well. I took him aside and told him never to do it again; yet I was called in less than a week by the same man to see a primipara and she was in the same condition. He did not wait three hours from the primary pains. And he is not the only man who does this. A great many men put on forceps as soon as they can get them on. Some years ago a report of 1,255 cases was made by Dr. Senteny in which forceps were never used, and the complications were very few. It is this tinkering with instruments that get women into most of their trouble.

It seems to me that the worst so-called perineal tears I have ever seen have not had any external evidence at all, yet the after effects upon the support of the uterus have been worst. I believe a number of these women have all the after symptoms of subinvolution, not from external tears of the skin part, but from injury to the muscles which control the vagina. I believe every man should go back and examine the woman with his finger in the rectum. The worst cases I have had to deal with have been of this kind, where I have had to do a colpoperineorrhaphy. I believe many women are suffering now that could be relieved of a subinvoluted uterus, without any external evidence at the gentials.

DR. L. S. MCMURTRY: Dr. Skinner has brought to our attention a very interesting subject, and his method of treatment is one that will do good. The tendency is to neglect this subject, and there are many errors which beget conditions which are not seen at the time. They come later into the hands of specialists and often the family physician is not aware of them.

In my judgment, one of the most vicious things in the profession, and I regret that it does occur, is for one to encourage the idea so easily lodged in the minds of the laity that the troubles following labor are due to some negligence on the part of the attending accoucheur. A great many women consult the surgeon and say they were greatly neglected during labor. Unless the surgeon takes pains to correct this error, many doctors are blamed for entirely unavoidable complications.

I want to say that after a large obstetrical experience, I am more and more impressed with the fact that the woman is nearly always able to deliver herself, and that in the majority of instances she will do best if let alone. Take time, encourage her, and let her alone.

Dr. Skinner has given us the classical methods of so-called support of the perineum. I think they are all useless. Take the maneuver of Goodell, the finger in the rectum, which he popularized in his lifetime. I do not believe it is of any use at all, or that pushing the head back or up can accomplish anything in the face of uterine contraction. I have tried all these methods, and I do not believe any of the known methods amount to anything at all. There are a large number of small women with large children, representing the development of two families, and only one side meets the issue of bringing them into the world. With a large head, laceration will occur in spite of everything that can be done.

In instrumental delivery, instead of carrying the handles of the forceps over the pubes, traction is too often made in the direct axis of the pelvis and laceration is nearly always the result. I operated on a case this morning where the structures inside the

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vagina were torn without any laceration of the skin. There was a large rectocele and you could feel the muscles off to one side, and the skin of the fourchette was not torn. Haste and unskillful use of instruments are the two most common causes of laceration, and both are avoidable.

In regard to the primary operation, it does succeed in a large proportion of cases, but in a certain proportion it will fail without any fault of the operator. These issues are all ragged and it is difficult to do a careful operation, since the woman is already exhausted and the doctor is worn out; failure may follow the best he can do.

I think we might improve over Dr. Skinner's suggestion to use silk, and use a more unyielding suture, such as silkworm gut or silver wire.

In regard to the suggestion of Dr. Wilson, I do not think repair of the laceration of the cervix is practical. With the lochia flowing over it constantly, I do not think this operation is practicable.

Dr. Frank Simpson: One of the things which I frequently do when I find the head coming down and the perineum unyielding is to give chloroform and let the dilatation of the perineum and vagina take place so I can work the head through without a tear. I have found that successful in many cases where I thought the head was going to break through everything. Up to this summer I had not had a tear for several years, and then I had two, one in a multipara, the other in a primipara. In the case of the primipara, she gave a jump just as the head was coming through and tore everything. In the multipara I took off the forceps before the head was delivered. I did not observe then that there was much of a tear, but a week later I found it was considerable. In the primipara, repair was made immediately by a surgeon and she has done well. It is frequently the tear we do not look for that gives us the trouble. I do not see how any operation could benefit the cervix at the time of the tear.

Dr. John G. Cecil: It seems to me there are several factors to be considered in this question. I believe obstetrics should be looked upon as a specialty more than it is. It is the worst paid of all the business that we do, and I believe that if we insisted on better fees we would do better work. In all primiparous cases it is advisable to have a consultant, for if there is some one to handle the chloroform better results will be obtained.

In reference to support of the perineum, I do not believe there is anything in it at all. I do believe we may sometimes be able to prevent a too precipitate delivery by pressure against the head, especially when the patient is under chloroform, however. We can hold it back a little. As suggested by several, time is the element. It is astonishing sometimes to see what perineums will slip over heads when well managed. I firmly believe we can control the perineum best by profound anesthesia, whether it is a forceps case or not. But this is sometimes hard to manage alone, and that is why a consultant is advisable.

With a forceps case, I believe you have a better control than any other way by leaving the forceps on until the head is practically out of the pelvis, with the perineal structures bulged out. If you can hold it there for a while with the forceps or hands and have the time to deliver, you will save 75 per cent. of the cases that would otherwise be torn. But there are some cases which nothing can prevent from tearing. I have seen better results from this method of protection than from anything else. You can then deliver between pains and if necessary force the head upward. It has not been my experience that shoulders make most of the tears. I have seen the perineum part over the head a number of times in precipitate labor or in the precipitous application of forceps.

As to the time of putting on the forceps, I do not think there is any more pernicious practice than the haste mentioned by Dr. Vance. I know a man who has made a practice of putting them on as soon as the caput formed, and that is sure to result in a tear. It seems to me there is a field here for the exercise of judgment such as is seldom presented in any other field of practice, the problem of just

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how long to wait. I do not believe that we should wait indefinitely, but a little long is better than a little short. They should have plenty of time.

We frequently do not make as careful examination inside the vagina as we should. It is a rule of mine that two months after the child is delivered, the woman comes to the office for a final examination, and if there are tears then is the time to repair them. I think it is a good routine practice.

Dr. Carl Weidner: I do a little obstetrical practice and believe that time is the essential element in these cases and that is where most of those sin who do sin. They are too anxious to get away. I recall one of my early experiences in Europe. During my attendance on the clinic, one of our first cases was one of rachitic pelvis, and the two students in attendance with me were very anxious to proceed as fast as possible and have a chance to put on forceps. We waited for twenty-four hours, and the first assistant would keep on telling us to wait. Our case lasted thirty-six hours and we were not allowed to put on forceps, and everything went well. That made a strong impression on my mind, and in the first few years of my practice I rarely ever used forceps, though in later years I have been in a little greater hurry. I am convinced that there are times when we may save the woman time and pain by using forceps, especially under chloroform, but we run the risk of rupture of the perineum, for it requires time to soften down these structures. The tissues are often rigid and a tear seems inevitable, but all at once they begin to melt away like snow before the sun.

Next to time, chloroform will lessen the tendency by taking away the excessive voluntary efforts of the patient and by the relaxation of the muscles. In the few cases I have had to rupture, it was the after-coming shoulders that caused it, after I had congratulated myself the head had passed.

As a prevention, there is nothing which does especial good. The method I prefer is to take a towel wrung out of hot water before the rupture is looked for and hold that against the perineum.

Dr. Louis Frank: I have had tears occur in my practice and have had quite a number come for secondary operations. I am in accord with most of what has been said. No man can prevent laceration in every case, for some are unavoidable. I think something can be done in avoiding tears by giving the patient plenty of time and controlling the head, which gains time for the relaxation of the levator muscle. This muscle may be in a state of rigidity from irritation of the head and the fascia may be so dense that, inspite of everything, the tear will occur without the accoucheur being at fault. In other cases the accoucheur may be to blame, where labor has been precipitated or forceps applied inadvisedly and improper traction made.

Very often at the time of delivery tears are overlooked, and too many men make the practice of examining externally the skin structures, whereas the damage is done in the floor of the vagina, to the levator muscle and the fascia. I pay very little attention to the so-called external tears. There are also tears which cannot be detected at the time no matter how skillful we may be. These are the so-called subcutaneous or submucous tears. The parts are so relaxed that no evidence by palpation or inspection exists.

As to episiotomy, I should think that where a tear seems unavoidable, the incision might be a good plan, though I have never done it. We would then have a lateral tear high up, which would be more susceptible to suturing and we would also avoid sloughing and the effusion of blood.

As to primary closure of the laceration, I think many times it is absolutely useless. The more I see of these cases the more I think they should be selected. If the labor has been prolonged, the sutures will almost invariably slough out. The lochia may be retained unless the nurse is unusually competent. If we take the sutures out and do not examine the woman afterward, the patient goes to some one else later, and a condition of non-union of the levator is found. I do not believe external sutures are worth anything at all. An anterior retractor should be used and the tear approximated along

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the vaginal floor, if we want to do any good. The only good that comes from external suture is the cosmetic effect, for the skin does not affect the integrity of the perineum at all. Many men make a practice of carrying large perineal needles and suturing the skin structures.

I usually advise patients to wait and do a secondary closure by preference. This division of lacerations into degree is of no use pathologically, practically or clinically, for if there is a tear in the floor of the vagina involving the fascia and levator, it makes no difference of what degree or further depth it is, the results are the same, so far as the effect of removal of the support of the pelvic viscera is concerned.

DR. BEN CARLOS FRAZIER: Dr. McMurty has spoken of the subject to which I wanted to draw attention, the unavoidable tears, and Dr. Cecil illuminated it by explaining our need of an assistant. I can recall several cases where I am satisfied laceration would not have occurred if I had had an assistant to give the anesthetic to a surgical degree, so that I could hold back the head.

As to the shoulders, I have had two or three tears, one recently. The head was born without any tear at all, and I had told the nurse to let up on the chloroform and the baby had begun to breathe; then it got blue and I had to deliver it rapidly and got a tear. I think we should have an assistant in all our cases to administer the chloroform. I have had little occasion to use forceps, but sometimes they have to be used. I have never seen a primipara delivered with forceps without a tear.

DR. AP M. VANCE: I believe the woman should have the benefit of the doubt in the primary operation, especially if a gynecologist is operating. We get perfect results in quite a proportion of cases, and this entitles them to the benefit of the doubt.

DR. SKINNER (closing): There is a class of perenei, the fat ones, which I look upon with great anxiety, for the fat interferes with dilation. The worst tears I have seen have been in women of that character. Thin women will stretch like rubber.

As to the primary operation, I am rather inclined to Dr. Frank's view that we do not get the results that we should. We get nice looking results, but have not benefitted the woman, and this often keeps her from seeking attention afterward. Dr. Cecil brought out a point that we are yet far away from, that this work should be a specialty; but it takes money to make a specialty, and when men call a doctor for their wives they want a "moderate" bill and insist on doing without an assistant. We do need assistance in these cases so that the man in charge can give his entire time to the delivery.

I believe the majority of tears are from the head, which is the part most unyielding. By lifting up one at a time, we can lessen the danger of the shoulders. I do not believe many of the shoulder tears, so-called, are really of that character at all. The presence of blood on the neck shows what caused the tear. I think the torn perineum will often slip over the head undetected, and we think the shoulders made the tear.

TETANUS.*

BY W. O. ROBERTS, M.D.,
LOUISVILLE, KY.

The following is a brief history, made from notes furnished me by my interne, Dr. Barney Dreyfus, of a case of tetanus treated at the City Hospital during my recent term of service. The patient, F. M., was white, male, aged 22, unmarried and a laborer. On the morning of October 27, 1903, while at work in the stable, he stuck a nail into his great toe, and the next day he struck the same toe with a hammer, producing a lacerated wound and knocking off the toe-nail. On Sunday, November 1, five days after the receipt of the injury, he began to suffer from soreness of the throat, and pain in the neck, also in his back and head. Monday morning, November 2, these symptoms continued and he now noticed that he had great difficulty in moving his jaw. At 3 p.m. of the same day he was admitted to the hospital. An examination revealed a dirty wound, bathed in pus, with swelling and redness of the toe. There was no

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dressing on it. His temperature was 99.8, pulse 80. There was rigidity of muscles of the jaw. The toe was thoroughly cleansed and dressed antiseptically. The patient was placed in a darkened room, and was given half a drachm of bromide of ammonia, and twenty grains of hydrate of chloral.

At 4:30 p.m. his jaws became firmly locked. He gave the most pitiful moans, at the same time pointing to his jaws, and then passed into a violent convulsion. His abdominal muscles were rigid and his body assumed the opisthotonous position; the muscles of the neck stood out prominently; his eyes were fixed, and his face drawn into that frightful *risus sardonicus;* sweat poured from his face and body. These symptoms lasted for a few seconds. Then he relaxed partially, only to again resume this position upon the slightest noise. To control the convulsions, chloroform was administered, and as soon as he was under its influence he was given one drachm of bromide of ammonia, with thirty grains of chloral hydrate in three ounces of water by the bowel, and one-fourth of a grain of morphia with one-one hundred and fiftieth of atropia hypodermatically, which had a quieting effect upon him.

At 5:30, as he was becoming restless again, the bromide and chloral were administered in the same way. At 6:30 twenty c.c. of anti-tetanic serum were given hypodermatically. During the night the chloral and bromide were administered every two to four hours per rectum, as necessary, and anti-tetanic serum every three hours.

I saw the patient for the first time Tuesday morning, November 3d. His temperature was 102, pulse 112. He had great rigidity of the muscles of the jaw, neck, back and abdomen. The toe was swollen, and red, with some pus in the wound. We concluded to continue the same dose of tetanic serum every three hours, and the bromide and chloral every two or four hours, as indicated. At my clinic that afternoon at 2:30 I had Dr. Dreyfus amputate the entire toe, together with the head of the metatarsal bone. Tuesday night the convulsions were less frequent and violent. At four o'clock Wednesday morning his jaws relaxed. He now asked for milk, which was given him, but the act of swallowing brought on a convulsion. This was treated in the same way as the previous ones, with chloroform. The tetanic serum and chloral and bromide had been continued through the night. At 6 a.m. he was given some beef juice, with a couple of drops of croton oil, which he was able to swallow. His temperature during the night varied from 100 to 103; his pulse ran up to 130. The dose of croton oil was soon followed by a large evacuation from the bowel.

During Wednesday the symptoms were so much alleviated that the dose of tetanic serum was reduced one-half; chloral and bromide were continued. As no further convulsion occurred after 6 p.m. Wednesday, the tetanic serum was discontinued. During the day of Wednesday he was given liquid diet in small quantities at frequent intervals. There being no further convulsions, we did not resort again to the serum, but continued the chloral and bromide at longer intervals. His temperature was now normal, but pulse was weak and frequent. Tincture of digitalis was ordered, together with a tonic pill of phosphorus, 1-75 of a grain; arsenious acid, 1-40 of a grain; quinine, 1 grain; bichloride of mercury, ¼ of a grain, every four hours.

During Thursday there were no muscular spasms, excepting occasionally those of the neck, which ceased that afternoon. All that day he was quite nervous, and his mental condition seemed somewhat deranged. Thursday night he rested very quietly. His general condition improved from then on, so that in fifteen days he was able to be up, with the wound in the foot practically healed.

This case is reported with a view of eliciting a discussion of the treatment of tetanus, preventive and curative. There is a difference of opinion as to the best treatment of the wound itself. All agree that it should be enlarged and cleaned and all dead tissue cut away and shreds of badly injured tissue removed also. Some favor the use of bichloride of mercury in strength varying from one to two thousand to one

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to five hundred. DaCosta then paints the wound with bromine. Some use a two per cent. carbolic acid solution, while others use the acid pure. Some use the actual cautery, and Brewster, in his recent book, advocates nitrate of silver locally. All endeavor to prevent suppuration from taking place in the wound, as pus seems to protect the tetanus bacillus, the pathogenic organisms absorbing the oxygen. All call attention to the importance of not approximating the edges of the wound too closely, for fear of shutting in the bacillus. Even amputation has been advised, not only as a means of prophylaxis, but also in the treatment of tetanus.

After the onset of tetanus, amputation is advised on the theory that the bacilli are in the wound or its vicinity, and not in the blood, and that amputation stops further manufacture of the toxins. Others claim that amputation does no good because the toxins have already entered the nerve cells and become fixed when the symptoms begin. "Kitasto has shown that if a mouse is inoculated with tetanus near the root of the tail, excision of the tail and cauterization of the stump will not prevent tetanus, unless it is performed within one hour of inoculation. Nancrede inoculated sheep near the tail with tetanus spores, and although the moment tetanus appeared, he amputated well above the point of inoculation, the animal died of the disease." (DaCosta.)

The serum treatment has not been followed by the results which were expected from it. All authorities recommend its use, some with enthusiasm, others with little faith. There is no question but that the use of the antitetanic serum has lowered the mortality. Before its introduction the rate of mortality was about eighty per cent. Since then it has been reduced, Nancrede claims, only five per cent., but others claim forty to fifty per cent. Moschowitz collected 290 cases in which it had been used, with 117 deaths. It is claimed that the lack of results following its use is due to its not being used sufficiently early, in sufficient quantity, at short enough intervals, and its use not being continued a sufficient length of time. It seems to do more as a prophylactic than in the treatment of the acute form. As a prophylactic it has accomplished wonderful results in some hands. "Renier, who lives in the portion of France where tetanus is very common, after having lost four cases, resorted to antitetanic serum, and under its use he had no cases at all occur. One patient, when he omitted to use it, died."

"Herold, after losing three out of four cases that he met with in the German army in China, death occurring though the antitoxine was employed, gave orders that in the case of all wounds contaminated with earth, 200 c.c. of antitoxin should be given as a preventative. After this order had gone into effect, no more cases of tetanus occurred."

That it is by no means a certain preventative, the following case of Renier shows: "He injected antitetanic serum into a patient on whom he was about to operate, because there was a case of tetanus in the ward, and yet this man had tetanus."

It is claimed that the serum itself is not dangerous, if given under careful technique, and, therefore, I think it should be used whenever practicable. The usual dose is from twenty to fifty c.c. every three to twelve hours, as long as the convulsions continue. Half this quantity is the usual prophylactic dose. It is given hypodermatically, intravenous, subdural (brain or spine), or directly into the cerebrum. When injected into the cerebrum, the frontal lobes are selected, care being taken to avoid the motor centers. When used in this way, it is always supplemented by its use hypodermatically. Of course, the serum is never used to the exclusion of physiological remedies.

Barcelli's treatment, the subcutaneous injection of a two per cent. solution of carbolic acid in doses of from ten to thirty drops every two or three hours, is exceedingly popular in Italy. It is claimed that this treatment gives better results than that of antitoxin. It antagonizes the toxin and quiets the nervous system. From three to nine grains daily should be given according to the severity of the case. *"Case of

* Philadelphia *Medical Journal*, March 17, 1900.

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tetanus in which subdural injections of antitoxin led to no appreciable reaction, while, twenty-four hours later, opisthotonos set in, with marked cyanosis. Hypodermatic injections of five drops of pure carbolic acid in fifteen drops of water were then used. On the tenth day the symptoms moderated and on the twenty-fifth day the patient was able to sit up, and finally recovered."

"Case of traumatic tetanus in which severe symptoms developed soon after injury. Ten drops of a ten per cent. solution of carbolic acid were injected hypodermatically. In a few minutes fifteen drops more; then thirty drops. The dose of 30 drops was repeated every half hour all day and all night. The second day the same dose was injected every two hours all day and night. The second day the same dose was injected every two hours, and on the third day a drachm of the same solution was given in glycerine by the mouth three times a day. On the third day the patient was able to swallow, and then recovery was rapid and complete."

It will be seen from these two cases that carbolic acid was given in very much larger quantities than was used by Barcelli, who originated the treatment. It seems that cases of tetanus are remarkably tolerant towards carbolic acid. The carbolic acid treatment—like antitoxin—is not used to the exclusion of quieting remedies.

Kitasto has shown that injections of iodoform render animals immune, and Sonrani has maintained that this drug, in a wound, prevents the disease. DaCosta advises from three to five grains of iodoform to be given hypodermatically three times a day, provided antitoxin is not obtainable.

DISCUSSION.

Dr. F. C. Wilson: I have had experience with antitetanic serum in one case only, with recovery. It was used daily for eight or ten days. Chloral and bromide were also used.

Dr. Ap M. Vance: I have seen a great many cases of tetanus, but only one got well. I expect I have seen as many as thirty. In the case mentioned, an old negro, tetanus developed on the ninth day after the primary wound and three days after its reopening by a second accident. He was given a dram of bromide of potash every hour and every other hour a teaspoonful of bromidia. After he was thoroughly under its influence, with sordes on his tongue, he got well.

I have tried the serum in but one case, without effect. I have tried carbolic acid in one case, subcutaneously, and the patient died after two days. I saw a case in consultation the other day in a man of 57. It came on after 21 days and I saw him 21 days after it made its appearance. He had had serum for fifteen days, with bromide and chloral. He died on the 25th day after tetanus appeared.

It seems to me very unwise to tinker with the wound, except to keep it clean. When a wound has healed it is bad surgery to open it up, for septic material is likely to get into the blood current. Amputation before tetanus comes on has no influence in stopping it. I had a man some years ago with amputation at the shoulder for gangrene and 72 hours afterward tetanus developed and he died 72 hours later. I think the less done with the wound the better.

I am very skeptical about the serum and carbolic acid, and if the mortality has been reduced, we have not yet gotten on to the method of introducing it. It is astonishing how much carbolic acid these patients can stand. I think tetanus is something like diabetes; it is still an ugly proposition.

Dr. A. M. Cartledge: I do not know what I believe about tetanus. About all we can do is to report experiences. I have had three cases recover; but probably one should not be called genuine tetanus. I have had two get well under the old treatment of bromide and chloral. One was a very bad case which came on quite suddenly, a boy with a nail in his foot, tetanus developing in a few days. It was the most violent case I have seen. He recovered after eighteen or nineteen days.

The other was a woman with a nail wound, who developed tetanus late, which is more favorable. It developed two or three weeks afterward, and she got well after a long siege.

My experience with the serum has

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been confined to three cases. In these three it did not seem to do any good, which confirms my reading on the subject, that if the disease is well developed it has no effect. One was a pistol shot wound of the hand. I saw him one evening and gave him two heavy doses and he died at 3 o'clock the next day. The other was a case of a toy pistol wound last July; he died after two days. The third case was in a child who ran a splinter up its nose and developed tetanus. It had violent convulsions when I saw it.

All of these received the serum treatment and all died very promptly. Another case in which serum was used I do not feel like reporting because it is rather a lame proposition that these people make about prevention. If you gather up a great number of wounds that lead to tetanus, where previous experience has shown a mortality of five to ten per cent. of tetanus, and give them all preventive treatment and have no tetanus, it looks like there is something to it. But there are times when we see very little tetanus, and some practitioners go through life without ever seeing a case. So I think the serum is yet in the experimental stage and I would be loth to attribute any results to it. All of us see cases get well under the old line of treatment.

In the case reported by the essayist, bromide and chloral were given with the serum, and we have all had cases recover without the serum. When the Italian school brought this forth, I had hoped we would have a wonderful thing and was carried away with it. I agree with the gentleman who spoke about amputation. When tetanus has developed, it is in the spinal and nervous system, so I cannot see how amputation will do any good.

Dr. John G. Cecil: If I remember correctly, Dr. Yandell established the fact that the longer the tetanus is in developing after the primary wound, the better the chances for recovery under any form of treatment. My views are similar to those of Dr. Cartledge; it is hard to draw conclusions from any mixed form of treatment. In the case reported by the essayist, it would be impossible to say what part was played by the serum. In the investigations which I made last year in a report before the State Medical Society, I had occasion to look up the recent authorities and the concensus of opinion was that the serum treatment was not yet established. The reports vary a great deal. A number of observers said that the Italian investigators were remarkably fortunate with their cases. Either they had a better kind of serum or a different grade of tetanus, for quite a number report remarkable results. I remember that one German writer said that tetanus in Italy seemed to be a different disease from that in this country and he thought the treatment in Italy was in no respect better than in Germany.

Personally, I have had no experience with the serum. I hope it will develop something in the future, for we certainly need it. Inasmuch as this is a disease due to a bacillus, we ought to look in that direction for a cure. But up to date, the serum seems to be a failure, and I suppose in the statistics reported by the essayist, the Italian figures were included in the totals, and that may account for its reduction in mortality. I am inclined to think the Italian reports untrustworthy for some reason. If I should meet with a case I would feel it my duty to use the serum and push it, but I am free to say I would also use bromide and chloral to the limit. I would take the chances of poisoning the man with bromides in order to save him. I do not believe amputation of the affected part would be beneficial after tetanic symptoms have supervened. The bacilli are already at work in the spinal cord, and it is like shutting the stable door after the horse is gone. I have not been convinced that cerebral or spinal puncture has any claims in its favor.

Dr. J. E. Hays: I want to add my testimony to the value of chloral. I think it is the best single remedy we possess. It served me well in the only case I ever had, about fifteen years ago. Contrary to the usual way, it developed without any apparent traumatism in a school-girl eleven years of age; she came home from school, complainng of pain in the limbs and stiffness of the muscles of the neck, followed by

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stiffness of the masseter muscle. She suffered with pain and had slight convulsions, but never severe. She was at once placed under chloral hydrate and bromide treatment. It required seven grains of chloral and fifteen of bromide every two hours. The rigidity relaxed and it made her comfortable. These remedies were used day after day. After a week large doses of conium were substituted. She went back to the painfully rigid condition, aggravated by noise, and the former treatment was resumed. She recovered after two weeks.

She presented no injury, though her body was carefully searched. It was then considered an "idiopathic" case, but it presented the typical symptoms of tetanus.

DR. L. S. MCMURTRY: I have seen very little of tetanus in recent years. It is far more common in semi-tropical climates. During the two years I studied medicine in New Orleans I saw a great many cases. It is very common there, as in all warm climates. I always had an idea it was due to the fact that so many people go barefoot, especially the laboring people. There was nearly always a case at the Charity Hospital. They were treated by all the staff and in a great variety of ways. The chloral and bromide treatment was in vogue. I never saw any get well. The only recovery I have ever seen was in the practice of Dr. Jackson of Danville, in a negro boy eighteen years of age, with opisthotonous and all the classical symptoms. The only medicine he received was Dover's powder. He was given moderate doses and made a recovery after about two weeks.

The testimony of the speakers here to-night goes to show that we have no specific for the disease and that a few cases will get well under any form of treatment.

DR. TURNER ANDERSON: When Wood worked out the powerful influence of the bromides over the reflex function, it was almost as great a boon as the discovery of the intubation tube. Prior to that time nearly all cases of tetanus died. Up to that time I had seen a great many cases, but none recovered. But when he came out in his book and said that no cases died that were given enough bromide, I was impressed with it, and had three cases to get well. But they got well under very heroic doses. I have not seen many cases lately and the disease is perhaps not as frequent as formerly. Many years ago it seemed quite frequent, but I cannot recall a case in ten years.

Wood's statement about the bromide introduced the medicine into use. A number of cases were reported by Dr. Roemer of St. Louis about that time, 1873, fifteen or twenty, without a single death. The first case I saw was in consultation with Dr. Palmer, caused by a toy pistol. Bromide was pushed to the fullest extent, with almost complete absence of any reflex manifestations. After that experience I was disposed to rely upon heroic doses of bromide and I question whether enough of it is given in these cases. My experience was the same as with laryngeal diphtheria, one case of which I saw get well before the intubation tube was introduced. Prof. Yandell made a valuable contribution to prognosis in his article upon the lateness at which the disease developed.

DR. ROBERTS (closing): I have seen a great many cases of tetanus in my practice and that of my friends. I have had four cases to recover. The first case of mine that recovered was in a boy with a compound dislocation of the elbow-joint. He developed tetanus ten days after the injury, was treated with bromide, chloral and quinine and got well. Another case was in a man who had his finger mashed between two cars. He developed tetanus after the same length of time and got well under bromide and chloral. Another case which I saw with Prof. Cowling followed an operation for internal hemorrhoids and got well under bromide and chloral.

As to the bromide alone, I do not know how much Wood considers "enough," but in one case in which the wound was received in a stable, I gave an ounce and a half in 24 hours, but the man died. In his case tetanus came on inside of a week after the injury. Dr. Yandell said in his paper that tetanus coming on within a week after the injury is nearly always fatal,

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and from that time on the prognosis is better, and developing after two weeks, most cases get well.

As to the use of serum, this is the third case in which I have used it, but in neither of the other two did I have enough to give it a fair trial. I am inclined to think that it did good in these cases and I was sorry when it gave out. It is claimed that you get less effect from the serum when given hypodermatically than when given directly into the vein. It is also claimed that you get better results from the subdural injections than from either of the other two methods, and better still when injected directly into the brain.

It is true that most of the cases I have seen reported as successfully treated have been foreign, Italian and Japanese. Abbe of New York City reports five cases in which he used serum in the brain, with three recoveries. It is advised by most authorities that intracranial injections be used only in very severe cases coming on soon after the injury.

As to amputation, I rather favor it, especially if suppuration has taken place. I believe this toxin is manufactured in the wound and vicinity and is being carried into the blood all the time, and amputation stops the supply. I have had no experience at all with the carbolic acid treatment, but I shall try it the next opportunity I have. After Cutasto's statement about the effect of iodoform in suspicious wounds, I believe they should be treated with that, after being thoroughly cleansed and all dead tissue removed. Tetanus seems to increase the power of the system to stand carbolic acid. Of course, while giving very large doses we should watch the urine and be governed by its condition.

FOR SPASMODIC DYSMENORRHEA.

℞

Extracti hyoscyami, fl.....dr.	ii
Extracti cannabis Indicæ, fl..dr.	i
Extracti cimicifagæ, fl.....dr.	iv
Spiritus camphoræ.....dr.	i
Spiritus etheris compos., q.s..oz.	iii

M. Sig: One teaspoonful in water three times a day, prior to and during a period.

[Reported by E. A. Forbes.]

DIABETES MELLITUS.*

BY J. A. FLEXNER, M.D.,
LOUISVILLE, KY.

Probably no single disease to which human flesh is heir has had more study and investigation than diabetes, and few diseases have as large a literature. It is not a little curious that for many years the attention of medical men was centered on the mere presence of sugar in the urine, that treatment was directed to this feature alone. It ought not to be lost sight of that sugar in the urine alone does not constitute diabetes any more than fever constitutes malaria; and, of all the diseases we are called upon to treat and manage, of this one it may surely be said, "We ought to treat the patient and not the name of the disease." This must be all the more manifest when we recall the several conditions which may account for the presence of saccharine matter in the urine. That the kidneys are a competent filter against the passage of sugar from the blood into the urine only when the blood stream contains 0.2 per cent., or less, ought not to be lost sight of.

The experimental diabetes caused by phloridzin in dogs is due to the injurious action of the drug upon the renal epithellum. It renders the renal filter ncompetent, and so a blood containing the normal amount of sugar will in these experimental animals transude a saccharine urine through the kidneys. That any such cause obtains in man to any great extent is not likely, as autopsies on many well-marked cases of death from diabetes fail to show any morbid changes in the kidneys.

But a very different condition obtains when the blood stream contains more than the above-named percentage of sugar, and when the capacity of the liver and the muscles for storing glycogen is fully utilized. Then the excess of sugar passes through the renal barrier as if it did not exist, and we get a urine with some of the characters of diabetic urine. Von Norden, in his article on diabetes in the *Twentieth*

* Abstract of paper read before Jefferson County Medical Society.

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Century Practice of Medicine, gives a table showing the quantities of the different sugars which are oxidizable daily, and when these amounts are exceeded, the excess of the sugar consumed will appear in the urine.

It is manifestly improper to put such physiological elimination of saccharine urine in the same class with the pathological sugar elimination of the true diabetic. Von Noorden describes the condition outlined as alimentary glycosuria, and the possibilities of its occurrence among the young, with whom true diabetes is rare and very fatal, ought to be ever present to the practitioner and make him study his case very carefully before pronouncing so grave a diagnosis as diabetes.

Over a century ago Cawley called attention to pancreatic diseases as a possible cause of diabetes, and since Mering and Minowsky's researches on dogs, in whom, after removal of the greater part or the whole of the pancreas, diabetes always results, the trend of modern medical research has been to connect diseased functions of this gland with true diabetes in man.

It is not denied that the condition may be due to disease of the central nervous system, as occurs in syphilitic disease of the fourth ventricle, or that it may be due to disease of the liver, as the late researches of Hirsh indicate, but undoubtedly these sources account but for a small part of the whole number of diabetics. Opie's studies on the islands of Langerhans—the solitary ductless glandular structure which is scattered through the pancreas—has shed a flood of light on the obscure glands as well as on their possible relation to diabetes. He has been fortunate enough to study some cases of hyaline degeneration of the pancreas when the disease affected the *islands* of Langerhans without involving the secretory part of the gland, and finds a close relationship between the destruction of these structures and diabetes.

Conheim has within the last few months supplied what is possibly the last link of various theories which forges all these researches into a complete chain. Briefly stated, Cohnheim has shown that, while neither pancreatic tissues nor muscle tissue of itself oxidizes glucose, when they are mixed glucose rapidly disappears until no trace of it is demonstrable; in the mixture of glucose, pancreas and muscle tissue and carbon dioxide the result of the oxidation of glucose is one of the products of the reaction.

Cohnheim's theory is that the pancreas supplies a ferment which renders active a ferment resident in the muscle tissue, as the intestinal *enterokinase* of Pawler renders active the trypsin in the small intestine, and, if confirmed by subsequent research, will show the mechanism of the disposal of the body sugar in a very clear way.

That the condition in the great majority of cases is due to an inability to properly oxidize the glycogen rather than to an overproduction of sugar is apparent, and while the sugar escapes too rapidly on the one hand, the need for its presence is indicated in various ways on the other. It is now considered an established fact that the diabetic can and does so decompose the albumen molecule as to get sugar from it, and many authors consider this true also of the fat molecule. Why, then, deny the diabetic *enough* starches and sugar in his food to prevent this self-consumption?

That such metabolic products as oxy-butryck acid, diacetic acid and acetone, which are active in the causation of the fatal diabetic como, are the consequences of this form of destruction of the tissue proteid and fats, is proved, and this dreaded complication of diabetes frequently results in just these cases where too rigid carbohydrate exclusion is practiced. Von Noorden tersely expresses this result by stating that the physician may have the grim satisfaction of seeing his patient die without sugar in his urine, but from the coma resulting from his treatment.

While not undervaluing the quantitative estimation of sugar eliminated as useful in estimating the progress of the disease, to me it seems of equal, if not greater importance, to keep watch on the body weight and to so adjust the diet that great loss of weight does not occur. I know no disease where more care on the part of the physician

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and more xplicit obedience on he part of the patient is required. While we do not accomplish much as yet in the disease in the young, much may be done by skillful dietetics, combined with appropriate medicinal treatment in the milder forms of the disease as we usually meet it after forty.

Of the medicinal specifics I have said nothing, because I do not feel that much can truthfully be said of them. To know the patients' case well, to arrange a diet with reference to the individual and his immediate peculiarities and idiosyncrasies, to watch not only the patient's urine, but the whole patient, to give medicine only when it is needed and while it is needed and for its specific effects, will take the best there is in both the doctor and patient, and may result in symptomatic cure and long and useful lives in many cases.

DISCUSSION.

DR. CARL WEIDNER: I have had about four detahs from the disease in the last two years. It is insidious in onset and often overlooked in the early stages. Nervousness is one of the earliest manifestations and later on we have a varying amount of sugar in the urine. The sugar circulating in the blood causes dehydration of the tissues and this explains the thirst and dryness. Next we have intestinal disorders and poisons formed in the body. Later on come disturbances of the nervous system, amongst them there may be loss of reflexes, which may be mistaken for ataxia. Irritability of temper and melancholy are other manifestations. Finally convulsions and coma may close the scene.

There is no reason why we should not feed some carbo-hydrates to keep up the bodily vigor. We should not be too strict in our diet. In old people it has a tendency to be chronic and a strict diabetic is liable to do harm.

One interesting feature not mentioned is the complication of pulmonary tuberculosis. We might explain it one the same ground as fernunculosis and exanthomatous conditions of the skin.

We should not call every case of glycosuria diabetes, for it may be temporary and harmless, but we should watch them as carefully as we do albuminuria cases. Repeated examinations should be made and the amount of sugar considered. A good test is to give the patient three or four ounces of sugar; a healthy patient will throw off this sugar in twenty-four hours and a diabetic patient will not. It is like the beer test of the Germans in gonorrhea. In the severe forms of the disease, the worst is the pancreatic form. It is generally taken for granted that disease of the pancreas, including the islands of Langerhans, form a peculiar sugar whose identity we do not know.

DR. J. B. MARVIN: To my mind, the easiest classification of the disease would be the old-fashioned one—the old and the young, the lean and the fat. The management and prognosis in these are radically different. I feel helpless and hopeless in general diabetes in the young. This span of life rarely exceeds a few years. I have recently lost a case in an elderly lady that I have watched for eight years; it finally went off with a nephritis. I have another case I saw ten years who is now in fairly good health.

I think it is well to bear in mind the four epochs in our pathological insight into this condition. First, the classical experiments of Claude Bernard with regard to the influence of the nervous system. Second, the action of phloridzin on the renal cells, causing the formation of glucose in the urine. Third, the influence of the pancreas. Perhaps we can blame the kidney for a third of the cases and the pancreas for fifty per cent. Fourth, the influence of the supra-renal gland. I think the influence of this structure upon the pancreas, causing the formation of enzyme, is a very important factor in our pathological advance. Recently O. Cohnheim finds that an enzyme is formed in muscle which alone does not act on sugar, but when mixed with the pancreatic solution from the cells of Langerhans is an energetic solvent.

There is a gap between dextrose, as it enters the blood, and its final stage. We know how starch and other forms of sugar are converted into glucose, but we stop short there. A recent

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writer, following another writer, sounds an important advance in claiming that glucose is changed into carbondioxide and alcohol and that alcohol is the most important and final step in the normal change, and that interference with it will increase the amount of sugar in the blood.

I am persuaded that one of the greatest misfortunes that can befall many diabetic patients is to apply for examination for life insurance and have sugar found in the urine. The majority of doctors are shy on chemistry and make mistakes, especially with the copper tests, and call many cases diabetes when they are not. When a man finds sugar by the copper test, he should hesitate until he has found it by the fermentation test.

Another misfortune is that when the doctor finds sugar, he pins his faith to the diet list and keeps him on too strict diet. For fifteen years I have raised my protest against the strict diet list for diabetics.

It is folly to put a man on a strict diet and have him die from lack of proper food, but without sugar in his urine. My personal experience has been that all young people with severe cases die either from pulmonary tuberculosis or in diabetic coma. I do not withhold oatmeal, or toast, or corn bread or potato chips. If I had diabetes, I would rather eat chips than die without them. The ravenous hunger of these patients is a plea for food, and if we do not give it to them they will eat it themselves. It is the same about water. I more frequently give acids. I do not believe in giving opium or codeine. I do not see how these can be other than harmful. I give oils, iron and general tonics.

Moreover, I do not withhold alcohol in these cases. I give a little wine or brandy, though I do not use it myself. I believe alcohol acts as a food. Nature makes alcohol enough to supply my physiological demands, but if I had diabetes I would rather trust to that and a moderate amount of mixed diet than to all the medicines you can give me. It is well enough to cut down the diet at first while making tests, but then give something to eat.

We overlook one very important test while making our test for sugar, viz., testing with ferric chloride for acetone and diacetic acid. If they are present it is the strongest plea for cutting down albuminous foods and not attempting the strict or absolute diet.

Dr. Sidney J. Meyers: I would like especially to thank Dr. Flexner for his paper because at the last meeting of the society I read a paper which none of you heard on practically the same lines. I did not deal with the question of diabetic diet, but with all diet, and said I thought we had been adhering to too strict a diet. The younger men especially feel the necessity for this, because patients are being educated to cling to any new advancement. When they come into our offices they ask "What kind of diet will you put me on?"

Dr. Flexner knows of a family in which three diabetics have existed. This man is now under my care, and the last time I examined his urine I found eight per cent. of sugar, but his condition then was better than when the per cent. was one and three-fourths. His condition is better on mixed diet than on absolute diet. He drinks a pitcher of water every night and his condition is better now than it has been for years. I allow him two baked potatoes daily.

Dr. William Cheatham: It has been demonstrated to the satisfaction of the leading oculists that cataract, one of the changes the result of diabetes, depends upon, not the loss of fluids, but the presence of sugar. Fill the frog's anterior chamber with a solution of sugar, the lens will become opaque. Empty the chamber and fill it with a normal salt solution and the lens will clear up.

Dr. R. Alexander Bate: Where diabetes is due to changes in the pancreas, I presume the essayist's statement cannot be questioned. But I believe puncture of the floor of the fourth ventricle explains another class of cases that occurs. It is this class of causes which makes the disease so frequently met with in the Hebrew race. Where we have puncture of the floor of the fourth ventricle, the blood supply is

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stimulated through all the abdominal viscera. We may have a condition of uric acid producing the same changes in the brain centers, and in many cases, I think, that is the cause of sugar in the urine. In fifty per cent. of cases the pancreas is at fault, the islands of Langerhans being considered responsible.

Dr. August Schachner: We all know that diabetics are very poor surgical subjects. With reference to the surgery we are compelled to do, such as amputation for gangrene, the German authorities have reminded us that we amputate too low down; that we have arterial sclerosia, especially of the tibial arteries, and we should amputate beyond the tibia.

Dr. Marvin mentioned our deficiency in chemical knowledge and I recall that Billroth made the statement that it was along that line that the greatest advance in medicine would be made.

Dr. F. C. Wilson: There is no satisfactory explanation of the prominence of this disease among the Hebrew race. It may be due to their mode of life or the character of their diet. The classification of diabetics into old and young is known to all. Old persons frequently go along for years and die of something else, but in the young it is generally fatal. The nervous system has a great deal to do with the production of diabetes. If we can stimulate and nourish the nervous system we can influence the disease. I agree that harm may be done by too strict diet.

Dr. J. B. Bullitt: I would like for Dr. Bate to explain the influence of puncture of the floor of the fourth ventricle on the disease.

Dr. R. Alexander Bate: The point is this, alteration in the circulation produced by uricacidaemia would cause a similar stimulation and increase the flow of blood through all the abdominal viscera. Presumably the production of glycogen is thus increased, and certainly a greater quantity of glycogen is absorbed by this increased quantity of blood. As for the Hebrew race, I believe it is generally believed that where the "family-tree" is very long (aristocracy) uric acid conditions exist more frequently, and this accounts for the preponderance in that race. Deficient oxydation accounts for diabetes in the children of the Ghetto.

Dr. Flexner (closing): Longhope has been studying the blood with especial reference to its immunizing power on bacteria. In these chronic diseases the inhibitory power of the blood over various organisms is found to be lost, and it is this loss of power that explains the existence of so many complications of pulmonary tuberculosis better than the old idea that the blood of diabetics is a better culture medium for the tubercle bacillus.

Dr. Sidney J. Myers: The question about its preponderance in the Hebrew race has often been asked. I believe that diabetes is primarily a chemical condition, and I do know that the Jews eat a diet distinctly different from that of any other race. Several of their favorite dishes are cooked with sugar and vinegar, and it may be that the sugar is so changed that the dehydrating changes cannot take hold of these. I throw it out as a suggestion that their favorite practice of cooking sweets and sours together may explain the preponderance of the disease in that race.

Dr. J. A. Flexner: I just want to call attention to the fact that the authorities state that the Jews are in the majority and that they say diabetes is a disease of the dark-skinned races. I think the Jews are better feeders and heavier eaters as a rule than other races. Other races have diseases peculiarly characteristic of them. There is much less of diabetes among American Jews than among Russian Jews.

Remember the coming medical meetings: Kentucky State Medical Association, May —, at Lexington; American Medical Association, June 7–10, at Atlantic City, N. J., and the Mississippi Valley Medical Association, October 11–13, Cincinnati, O.

A special train from Kentucky will be run via Louisville & Nashville and Pennsylvania lines to Atlantic City, leaving Louisville June 5, reaching Atlantic City June 6, the day before the meeting. Write the editors for detail information.

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SURGERY OF THE PANCREAS.*

BY JOHN B. WATHEN, A.B., M.D.,

Professor of Surgery in Kentucky School of Medicine; Surgeon to St. Anthony's Hospital, Louisville City Hospital and Kentucky School of Medicine Hospital,

LOUISVILLE, KY.

Diseases of the pancreas have, until comparatively recent years, attracted very little attention, and only through their association with pathological conditions in neighboring structures which are now treated surgically, have we made special study of this organ.

Before discussing the surgery of the pancreas, I will briefly allude to a few anatomical and pathological facts brought out by the latest research, and which bear upon its surgical consideration. The pancreas is a retro-peritoneal organ, lying deep in the epigastric and left hypochondriac regions, behind the stomach and lesser peritoneal sac, and between the duodenum and spleen. It is reached by raising the omentum and transverse colon, dividing the lower layer of the transverse mesocolon, and elevating the upper layer, which covers the pancreas; or, it may be reached by dividing the gastro-colic or gastro-hepatic ligaments, and then the peritoneum at the back of the lesser peritoneal sac.

The above is the transperitoneal route, but it may also be exposed by the retroperitoneal method, through the muscles of the back, but this latter method is seldom employed.

The pancreas is usually provided with two ducts, the duct of Wirsung, which is the larger, and joins the common bile duct at the diverticulum of Vater, to enter the intestine; and the duct of Santorini, which ends in a small papilla nearer the stomach than the larger duct. Variations in these ducts are often met with, but they are generally found in accordance with the plan of embryonic growth of the gland, and have an increased importance on account of the association of pancreatic diseases with pathological changes in the biliary passages.

Opie says that "the head of the pancreas consists of two well-defined lobes, corresponding to the two ducts of the gland. The anterior and lower part of the head is tributary to the duct of Santorini, and consists of lobules grouped about the duct and its branches. A second lobe is formed by a smaller mass of parenchyma disposed about the duct of Wirsung as it passes through the head of the gland, and is situated behind the larger lobe." The ducts of this organ are lined with columnar epithelium, which gradually merges into large glandular cells containing zymogen granules, lining the acini. Scattered between the acini are found the bodies of Langerhans, round or oval masses composed of polygonal cells grouped into columns, and supplied with a rich capillary network. These islands are found most numerous in the spleenic end, and by an internal secretion are supposed to exert an influence upon carbohydrate metabolism.

The relation of the pancreatic ducts to the biliary passages explains both experimentally and clinically the frequent cause of many pathological conditions found in this organ.

Opie says "the etiology of hemorrhagic inflammation of the pancreas has remained obscure, until a series of cases recently studied has demonstrated a relationship between this lesion and cholelithiasis. Since the common bile duct and the duct of Wirsung unite to form the diverticulum of Vater before they reach the duonenum, changes in the one may be transmitted to the other, thus producing secondary lesions in the liver and pancreas. The association of pancreatic disease with alterations of the bile passages has been noted by a number of writers."

Korte in his monograph upon surgery of the bile passages, especially mentions the fact that "diseases of the bile passages, cholelithiasis, are frequently associated with lesions of the pancreas, and it is probable that inflammation can extend from the bile duct to the gland." Oser makes a similar observation, and Lancereaux cites the possibility that "a gall-stone lodged in the common duct at the level of the diverticulum, may occlude the pancreatic duct and produce conditions favorable to penetration of mico-organisms into the pancreas."

The most frequent form of acute

knock out any individual opinion.

* Read before the Jefferson County Medical Society

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pancreatitis found in man is the hemorrhagic. This can be produced experimentally in animals by the injection of acids, bile, or other irritants.

In describing the pathological appearance of the organ, Fitz says: "The gland was frequently doubled in size, and might seem still larger when abundant fat tissue was present.

"The existence of hemorrhage was suspected by the appearance of the surface, which is of various shades of red. On section, however, the color may be dark red, reddish-brown, violet, reddish-black, or even black."

A careful distinction must be made between the condition of hemorrhagic pancreatitis and the so-called pancreatic hemorrhage or apoplexy, which may occur from trauma and cause sudden death.

The red and swollen gland of the hemorrhagic pancreatitis may undergo a change into a dark, slate-colored and foul-smelling mess, the gangrenous pancreatitis. The suppurative type of pancreatitis is divided into the primary, which originates in the pancreas, and the secondary from organs in its neighborhood by metastasis.

With the formation of pancreatic calculi, and the atrophy of the gland, there has often been observed diabetes. Flexner says: "Of the causes of the pathologic changes in the pancreas which produce diabetes, the chief one is supplied by concretions in the ducts. Of the 72 cases in the bibliography, 14 were due to pancreatic calculi. (Hausman)." In diabetes, an atrophy or sclerosis of the islands of Langerhans is especially noted, and these are the structures principally concerned in the production of the diabetes. "One can hardly fail to be convinced that Dr. Opie has proven the islands of Langerhans to be directly accountable for the regulation of carbohydrate circulation and elimination. He does not discuss the method in which this is accomplished, but he does conclude—logically from the facts as he finds them—that the presence of intact islands in fair numbers means the absence of glycosuria, and, conversely that their destruction is associated with sugar in the urine. This points conclusively to the presence of an internal secretion and places the pancreas in a sense among the ductless glands. He does not claim that all classes of diabetes are of pancreatic origin, but, by proving that many are, he paves the way for the broader contention." (Webster).

There has been established a relation between a pathological condition of the pancreas and fat necrosis, from abundant clinical evidence. Experimentally it has been proven by ligating the ducts and allowing the lymphatics to take up the retained secretion, or, where the organ has been lacerated, and the secretion has escaped into the abdominal cavity. The necrosis appears as white, or yellowish-white foci, from the size of a pin point to a pea, and scattered over the peritoneum and in the neighboring organs.

The symptoms which lead to a diagnosis of pancreatic diseases are first modifications in the physiological excretions; namely, sugar in the urine and fatty stools, with undigested muscle-fibers; and, second, local pain and tenderness over the organ, and possibly obstruction in the gastro-intestinal and biliary tracts.

Fitz has observed that "the symptoms which have proven most useful in diagnosis are those which call attention directly to the region of the pancreas. They are epigastric pain, tenderness, tension and tumor, with or without obstructive jaundice, and evidence of mechanical interference with the motility of the stomach and duodenum. Vomiting, sometimes frequent or incessant and often distressing, is customary among the early symptoms of acute pancreatitis, and constipation, at times obstinate, is the rule. So constant are these motor disturbances that the frequent diagnosis in cases of acute pancreatitis is intestinal obstruction."

The differential diagnosis in acute pancreatitis is then to be made between perforation of the digestive or biliary tracts, acute intestinal obstruction, and possibly an irritant poison, the latter cause easily eliminated, and the two former calling for surgical interference.

In chronic diseases of the pancreas, localized pain, especially after the

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presence of a tumor, the finding of sugar in the urine with fats and muscle-fibers in the feces, often lead to a diagnosis. Monyihan mentions the fact that "many cases of pancreatic disease are discovered when operating for gall bladder disease. The great majority of our cases of pancreatitis have been discovered simply because we have gone a step further in our gall bladder operations."

The differential diagnosis is then between a chronic pancreatitis, possibly associated with calculi, cysts and tumors, not forgetting the association of diseases of *this organ* with jaundice.

In considering the surgical treatment of diseases of the pancreas, we are confronted with two important facts, namely, the control of hemorrhage, and the prevention of escape of pancreatic secretion from the injured parenchyma.

Von Mikulicz says: "The pancreas is very rich in blood vessels, and hemorrhage from an injury is difficult to control. Simple tying of the fragile tissues is insufficient, and one must stop the bleeding with sutures deeply buried in the tissues, and including much of the latter which has the disadvantage of causing the parenchyma to necrose.

"In spite of deep sutures and heavy ligatures *en masse,* blood and pancreatic secretions ooze into the peritoneal cavity, preventing the formation of peritoneal adhesions, which in abdominal operations in general are so important a protection."

The effect of this leakage of the pancreatic secretion has been demonstrated by statistics of resections of the stomach for cancer. In those operations where the pancreas was injured from freeing the tumor from adhesions to this organ, 70 per cent. died, while in those not involving the pancreas only 27.5 per cent. died.

The pancreatic secretion, by its local irritation of the peritoneum, allows the germs of sepsis a better opportunity to produce infection. Von Mikulicz has beautifully summed up this principle of infection when he says, "Even with the present stages of our aseptic technique, it is not possible to prevent all germs from reaching the abdominal cavity during laparotomy. An uninjured peritoneum will resist this infection if the germs are not introduced in certain quantities. But if the vitality of the peritoneum has been impaired by the action of the pancreatic secretions, then a very limited number of bacteria are sufficient to cause peritonitis."

The greatest care should be used to avoid the escape of this secretion into the abdominal cavity, to thus prevent the intestinal paralysis, and later intestinal obstruction. Even when we are able to completely close the wounded parts by covering with a peritoneal coat, we should not fail to provide free and adequate drainage with a Mikulicz gauze tampon.

Statistics have clearly shown the wisdom of this method of procedure, when in 12 cases of stab, or gunshot wounds, eight were drained and six of the eight recovered, while of the undrained four cases three died. Mikulicz, to show the advantage of drainage, collected 30 cases operated upon for acute disease of the pancreas, and found the mortality in those drained only 38 per cent., while those not drained showed 80 per cent., and he thus draws the conclusion that "Wherever the pancreatic tissue has been exposed at all, the abdominal cavity must be tamponed and drainage established."

The pancreatic diseases of most interest to the surgeon may be classified under three general heads, namely, the *injuries,* the *inflammations* and the *new growths.* In the first class, the *injuries,* we usually have neighboring organs also damaged, thus often causing us to overlook any trauma to the deep-seated pancreas, and on account of the amount of repair needed on these other structures, the operation is made more difficult. It is the firm conviction of the writer that many unexpected deaths have resulted from an overlooked wound of the pancreas, the case of the late President McKinley possibly belonging to this class.

The 45 cases of pancreatic injuries collected by Von Mikulicz show that 21 were penetrating and 24 sub-cutaneous from blunt force.

"Of the 21 penetrating wounds, 12

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were of gunshot origin, and 9 were stab wounds. Of the gunshot wounds, five were operated upon, two dying and three recovering. The seven that were not operated upon died. The nine stab wounds were all operated upon, one dying and eight recovering. Of the subcutaneous injuries, thirteen were not operated upon and all died; of the eleven operated upon, seven recovered." (Von Mikulicz.)

In the second class, the *inflammations,* the acute pancreatitis is of most importance. As this condition is now acknowledged to belong to the acute infectious processes, the treatment is of necessity the same as in other similar conditions, namely, to open the focus of infection amply and drain away the toxic exudate by gauze tampons. Statistics show that while only nine out of the 46 operated upon in the acute stage recovered, 18 recovered out of 35 when operated upon in a later stage. When intestinal obstruction has occurred, an artificial anus in the cecum should be established to relieve the condition of intestinal paralysis, after the abdominal cavity has been thoroughly irrigated.

Until a comparatively short time ago, chronic inflammations of the pancreas were not considered amenable to treatment, but the observations of such men as Von Mikulicz, Reidel, Koerte, Lancereaux, Hardin, Robson, Halsted and Opie, and Mayo have shown that cases are not only improved, but cured by surgery. Gall stones located in the common bile duct at the diverticulum of Vater, occluding the pancreatic duct of Wirsung, may be removed, as also the true pancreatic calculi, giving relief.

Mayo Robson reports 22 cases of chronic pancreatitis operated upon, with only one death from operation.

In the last class, the new growths, cysts of the pancreas seem the most common, and 134 cases have been collected by Oser. Robson and Moynihan have classified these cysts in the following six groups: Retention, proliferation, hemorrhagic, hyatid, congenital and pseudo-cysts or peri-pancreatic cysts.

The retention cysts may be caused by the impaction of calculi, stricture, pressure from without, abnormalities of shape or position and closure of ducts by obstruction with parasites.

The proliferation cysts are multilocular and glandular tumors, lined with cylindrical epithelium, often containing blood-stained liquid, and occur near the tail rather than near the head of the pancreas. Many of these growths border very closely on malignancy.

The hemorrhagic cysts are either a hemorrhage into a cyst or are apoplexy of the pancreas and cystic degeneration in the resultant clot.

The hydatid cysts may occur, but are quite rare.

The congenital cysts are a congenital cystic degeneration of the pancreas, and hardly admit of surgical relief.

The pseudo cysts or peri-pancreatic cysts are really not cysts of this organ, but collections of fluid in the lesser omental cavity, so closely related to this organ that it is often impossible to distinguish the difference. They probably make up a large proportion of the cases reported as cysts of the pancreas. These pseudo cysts may result from trauma, and for this reason have been found most often in men, while the true pancreatic cysts occur most in women. Roswell Park, in a recent paper, says: "These tumors may be present above the stomach, below it and between it and the colon, below the colon, or behind them both." They usually appear between the stomach and the colon. He further says, "The diagnosis has to be made generally from—

"1. Local peritonitis with fluid accumulation.

"2. Cholecytitis and distended gall bladder.

"3. Hydronephrosis and other fluid tumors of the kidney.

"4. Ovarian cysts.

"5. Hydated and other cysts of the liver.

"6. Adrenal cysts.

"7. Mesenteric cysts, including cysts of Mullerain and Wolffian, remains in the mesocolon.

"8. Omental cysts.

"9. Splenic cysts, hydatids, etc.

"10. Cysts of the stomach wall which have, in at least two cases, closely stimulated pancreatic cysts.

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"11. Retro-peritoneal lymph or other cysts.

"12. The pseudo-cysts."

The operative treatment of these cysts consists of opening with drainage or complete enucleation. Aspiration is never to be resorted to, and is strongly condemned by all who have had experience with these growths.

If drainage alone is attempted, it is probably best performed by a posterior incision through the muscles of the back, although it has been done by stitching the tumor sac to the anterior abdominal walls, or a tube and gauze drain can be introduced down to the cyst if it is small.

Complete enucleation of these cysts, just as in ovarian cysts, is of course the ideal treatment.

Ransohoff has collected 159 cases of pancreatic cysts operated upon, of which all except 34 were anchored to the anterior abdominal wall and drained, only five dying. In 23 total enucleation was made with two deaths.

Carcinoma is the principal solid tumor of the pancreas, and the collected statistics show that it occurs only in about one out of three or four hundred autopsies. Park says: "Cancer is by far more common in the head of the organ, which like the biliary passages is most open to infection, more than half the cases appearing here." "Terrier has extirpated one as large as the patient's head, which weighed 5½ pounds. Several times these tumors have been found the size of a fetal head."

Ruggie, of Bologna, in 1890, performed the first successful removal of a cancerous pancreas. Of 16 collected cases operated upon for this condition, eight died shortly after the operation, and the others made a temporary or permanent recovery.

Tuberculosis and other diseases of the pancreas are rare. In conclusion, the writer can do no better than to quote the words of Maurice Richardson when he says: "On the whole, therefore, the surgery of the pancreas is encouraging, even in the most aggressive lesions. It is a field, however, which encourages abundant research, the results of which let us hope will add a new chapter to the brilliant achievements of medicine and surgery."

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[Reported by E. A. Forbes.]

CONGENITAL DISLOCATION OF THE HIP.

BY JAMES B. BULLITT, M.D.

LOUISVILLE, KY.

This is not a very frequent condition, but one of great importance because it subjects the patient to serious deformity throughout life and renders the subject unfit for the ordinary social intercourses of life. It has been especially agitated recently since the advent of Dr. Lorenz.

First, as to the pathological and anatomical conditions present. It has never been determined what are the etiological factors, but is simply known to occur during intra uterine life. If it occurred at birth, it would not be congenital. The supposition is that through some abnormal position of the limb, the bone head is gradually forced out of the socket and comes to lie on the dorsum of the ileum. As the child grows the head is subjected to abnormal pressure and assumes an abnormal shape and comes to assume a flattened aspect from before backward. The ligamentum teres is nearly always absent and the acetabulum is generally deficient in depth and room, and it has been the supposition that this deficiency accounts for the slipping of the bone head out of the cavity; but, on the contrary, this deficiency is probably due to the fact that the head of the bone is not present in the actebulum. Many of these cases are not discovered at birth, for it requires a considerable degree of observative skill to distinguish it. Most physicians look the child over to see if it is perfect, but this deformity is liable to escape observation and is not discovered until the child begins to walk. These children generally walk at a later date than others, and the gait is typical,

*Address made before the Louisville Academy of Medicine on February 8, 1904.

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especially if the dislocation is double. The gait is that of the sea-faring man on land, with the legs apart. The head of the bone slips up and down in its acquired cavity.

Formerly surgeons tried many plans to help these patients. Volkmann had a daughter with this deformity, and, as he was a very ingenious surgeon, he tried a variety of things, such as a pelvic band to support the head of the bone. He concluded nothing could be done by the surgeon and simply put on a weight and pulley at night and used nothing during the day.

Dr. Brown, of Boston, later reported a case in which, by traction and position, he succeeded in making the head of the bone resume its position. He had an unusually favorable case to deal with, the parents assisting him so that the child was kept on its back for three years until the head of the bone seemed to be in the acetabulum. It was considered quite a triumph at the time; but when the child came to walk, it was found that the effort had been a complete failure.

Nothing more was done until Hoffa, in the '80's, conceived the idea of operating by dividing resisting structures and deepening the acetabulum. This was done a great many times with apparent success, but in most cases it was found that ankylosis developed and the child had a hip with less function than before.

A little before this time Koenig, of Gottingen, proposed cutting down on the head of the bone, not attempting to replace the head in the acetabulum, but chiseling off a shelf of bone above the head and so making a new acetabulum. This was done in two or three cases. One of them has been described by him since. In that case the child died a year or two later with diphtheria or scarlet fever. He made a post mortem and found that the head did engage in the new acetabulum. This operation has practically not been attempted by any one else and was not practiced for the reason that Hoffa's operation had been suggested.

Lorenz undertook to improve Hoffa's operation and did a large number of these operations, 232 being reported up to 1896. His mortality was large and the results not satisfactory. I was in Vienna about the time of his first operation and remember his description before the class. That patient died. He described it as very difficult and very bloody and he said he thought only the young children should be operated on. His success was not of a nature to justify him in continuing his procedure and he has since abandoned it for the so-called bloodless method.

A few words about Dr. Lorenz himself. He was at one time assistant to Albert of Vienna, and at that time carbolic acid was very largely used as an antiseptic and considered essential. Dr. Lorenz said that every time he used it he developed a dermatitis and this condition became so aggravated that even the smell of the carbolic acid would bring on a return of the dermatitis. At that time he thought he could not do surgery without it, so he took up orthopedic surgery, where cutting and carbolic were not so essential. He impressed me at the time as being a good orthopedic surgeon. This was before he was being spoken of in this country. I had had the benefit of a pretty thorough orthopedic training in New York City and felt able to make some comparisons, and I felt then that he was one of the best men I had ever seen.

When he came to America it was to operate on Armour's child, who had been previously operated on by Ridlon, of Chicago, who had produced an anterior dislocation of the hip. Lorenz operated only on the other hip. He produced on his side exactly the same condition as did Ridlon on the other. Lorenz has said that this effect is often produced and that if the head of the bone can be kept in that position, the patient is greatly benefitted because the poise is restored. The upright position can be resumed, and this is one of the benefits, even if the head fails to get into the acetabulum.

Following Dr. Lorenz' advent, the lay papers took up the subject and he gave clinics all over the country and became the subject of criticism of the surgeons generally. I have been inclined to the belief, from what I knew of him, that this notoriety was entirely unsought by Lorenz and that he had

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been the victim of the newsvender, and I am still inclined to this opinion. But I find on inquiry that this is not the general impression made in America. Some surgeons seem to think he was over here to exploit himself and make all the money he could, that it was a gigantic advertising scheme. But no German understands American conditions well enough to protect himself against newspaper notoriety. A man may have the best of intentions and these people will succeed in getting their reports through others.

As to bloodless reposition itself, it is only possible where the patient is sufficiently young. If the dislocation is of the double variety, he must be younger than if it is single. If the child has one sound hip, more stress will be laid upon that hip to protect the other and it is not developed to the same extent as it is if the dislocation be double. If it is double the two hips do an equal amount of work and are equally developed, and at a given age, the child with the double dislocation will be harder to repose than one with a single. Lorenz said that a single dislocation could not be reposed after eight years and a double after six or seven. He proposes by traction and attitude and manual replacement to force the head of the bone back into the acetabulum and make it retain that position by attitude, flexion and extreme abduction, until the limb will lie in the plane of the body. Then, after a few weeks, he is placed on his feet and, if the dislocation be single, is allowed to walk sideways. The idea is to make the head of the bone make an acetabulum of its own.

Now, that this is possible I know personally to be true. I had the pleasure of seeing the pelvis of a child about nine years of age, who had been operated on by Dr. Edward Ochsner, of Chicago, who had been in Lorenz's clinic. It was a single dislocation. The parents removed to Colorado and the child died about two years later from some other disease. Ochsner had made these people promise that if anything happened to the child, he should have the opportunity of a post mortem; so when they telegraphed him he went out there and secured the whole pelvis. Looking at it from the front, it looks as if there were two perfect hip joints present, but on the reposed side the head of the bone is seen to lie more superficially. When you turn the heads of the bones out you see that on the sound side of the head is spherical, but on the other flattened. The ligamentum teres is absent. In all other respects they are exactly the same. It had evidently had equal weight-bearing functions with the sound one, though the extreme range of motion was not as great; in all other respects it would have been considered a practically normal joint. Many gentlemen have expressed the belief that this is not possible, but I have seen it with my own eyes.

This was an unusually favorable case and the results unusually good. After talking it over with other men, I am convinced that it is seldom this result can be obtained. The difficulties are often of such a nature that it is impossible to obtain reposition. The capsule is attached around the rim of the acetabulum and is carried several inches from the acetabulum with the dislocated head and is spread out over the acetabulum, and in most cases there is a constriction between the head of the bone and the attachment of the capsule; and when you attempt reposition it is impossible to get the head back through the small opening in the capsule. Therefore, it is only in the cases where the constriction of the acetabulum is so slight as to admit reduction of the bone head that such results can be looked for.

On the other hand, the difficulties will consist in overcoming the tension caused by shortening of the structures, and these are insurmountable in older children. In younger children it is always possible to overcome muscular and ligamentous resistance, but it will not always be possible to overcome the constriction in the capsule proper. Therefore, this operation must be limited to a comparatively few fortunate cases, but many will be benefitted by producing another form of dislocation.

Whitman, about two years ago, dealt with this same subject very much as I propose to deal with it now. My convictions have been confirmed by some

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cases I have seen recently with Dr. Sherman, of San Francisco. He told me of Lorenz's visit out there, where he made the same impression upon the surgeons as elsewhere. He tried a number of these cases and was not ideally successful in any of them. Sherman decided to cut down on one of them in which he had failed; he found the capsule constricted so that it was practically impossible to force the head of the bone through the constriction. The efforts Lorenz makes to do this are excessive and the muscular effort made in forcing the head back in position is tremendous. He occasionally fractures the thigh bone, or ruptures the femoral artery, or injures a nerve so that paralysis results. Sherman, in the first case I spoke of, found that it would have been impossible for anybody to effect reposition without splitting the capsule. He slipped the bone head back into the acetabulum without any effort to deepen it. The capsule of the joint was sutured over the head of the bone. After a few weeks the child was put on its feet. I saw two children treated that way. Reposition had persisted and the child had a very good limb, but not so good as it will be. There was no ankylosis in these cases because Sherman made no effort to deepen the acetabulum, thus making a raw surface to increase the danger of ankylosis. He has operated on about half a dozen cases and proposes to treat all his cases that way in the future. He claims it is devoid of great danger and that it saves a long space of time in the event of failure through the "bloodless method." For all these reasons he believes it has many virtues over the Lorenz method and certainly over the old bloody method where the capsule was cut through and the acetabulum gouged out.

It seems to me he has come very near to the mark Whitman set. Many surgeons are still inclined to be conservative and think it is better to attempt bloodless reposition. But when you consider that there are real dangers in the so-called "bloodless" method. and that they are scarcely greater in the method I have described, and that results are secured in less time with more certainty, it seems to me we would be justified in doing this operation.

I have often talked with Dr. Vance about this matter, but he has always believed the operation too dangerous and the results too problematical to promise much to the patients' families. People in this part of the world are not willing to have children operated upon without more promise of results. But I think the time has come when children should be subjected to this operation. This is the golden time, just as in club-feet, for each succeeding year increases the deformity and the difficulty of doing them any good.

DISCUSSION.

DR. G A HENDON: I wish to thank Dr. Bullitt for such a clear exposition of this subject, which has been foggy to my mind ever since it became public property. He has mentioned many points which serve to clear up the obscure features about the case. It illustrates also many of the difficulties connected with dorsal dislocations in children under five. In those cases, beware of the arthritis, which may produce a deformity as great as the dislocation itself. I saw a case of this kind last May in a child three and a half years old, which I reduced with difficulty, but after the apparatus was removed the leg resumed the position of dorsal dislocation. It also impresses upon me the fact that the open method bears the same relationship to the gravity and dangers as to try to operate anywhere else blindly. You cannot tell how much force you are using. If my child had congential dislocation, I would rather have a man operate who could see what he was doing. In the case of anterior dislocation, the position would be rather precarious, poised on the margin of the acetabulum, but substantial facts out any individual opinion.

TONSILITIS.

℞ Sod. benzoat..... ʒi
Ex. cascara sagrad., fl... ʒi
Tongaline, q. s. ad.....ʒvi

M. Sig: A teaspoonful every two to four hours.

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Society Proceedings.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Friday, January 22, 1904, with Dr. Ben Carlos Frazier, President, in the Chair.

PULSATING EXOPHTHALMOS.

DR. WM. CHEATHAM: J. A. S., age 48, who two months ago fell 30 feet, striking on his head, right side. Said to have bled from nose and ears at the time. Since his fall has had severe titinnus which sounds like steam from an exhaust valve, he says. You will observe he has exophthalmos of right eye, that the pupil is dilated, and that there is much congestion of eyeball, with many enlarged tortuous vessels. His right eye is blind. The optic nerve is atrophied, keratitis anesthesia of coma. He has what is known as pulsating exophthalmos. A distinct bruit can be heard in any part of the head, but plainer at the right temple or over the right eye. He says he had ptosis for several weeks. The eyeball is nearly fixed, excursion in any direction being very small. The gross symptoms in such a case are protusion of the eyeball with pulsation and a bruit. The pathology in some cases is obscure, as there are several local conditions giving very similar symptoms. This case I don't think is obscure, as the symptoms I believe to be typical of a varix. Vascular tumors, varicose veins, vascular malignant growths, true arterial aneurisms, and thrombus of the cavernous and adjacent sinuses, might give nearly the same symptoms. Norris and Oliver divide the cases into idiopathic and traumatic. The idiopathic cases come suddenly, with a snap, like a pistol shot, with pain in the head and eyeball. Rapidly increasing tinnitus follows, with exophthalmos, chemosis, etc., in quick succession. A majority of the cases are traumatic. In the traumatic cases we must look for a fracture of the base of the skull with its attendant symptoms, bleeding from ears, nose, etc. The symptoms here may be sudden or again very slow, sometimes showing themselves after a few months. If the case is one of aneurism it is important to locate it; to decide whether it is in the cranial cavity or in the orbit. Dead house investigations have demonstrated that the internal cartoid is much more predisposed to the development of aneurismal dilatation than any other artery of a corresponding size. In cases of varix we have associated with venous stasis, paralysis of the third, fourth and sixth nerves, with involvement of the first division of the fifth nerve as they all pass through the cavernous sinus. In 18 autopsies there were 11 cases of aneurism, eight of which were of the carotid in the cavernous sinus, two malignant tumor, in five no disease of arteries.

Treatment: Compression has relieved a few cases; injections have been tried with poor result. A mechanical compression of the common carotid or the tying of that vessel. Idiopathic cases are more favorable for compression; here it can be made interrupted. Salltir believes in compression. Success comes as early as the third day. In one case the bruit disappeared in four days, and the sight returned in six days; another case in eighteen days. In traumatic cases compression does not promise so much. The vessel walls are healthy, the coats smooth and a clot not so likely to form. Compression here must be continued from three to six hours and made at the top level of the thyroid cartillage. It seems to be advisable in all cases to try compression first. When the carotid is tied the case is usually well in six weeks. There are of course many dangers in this operation. Wyeth reports 43.16 per cent. of deaths in a series of 789 cases of ligation of the carotid for various diseases. In 63 cases of ligation for pulsating exophthalmos, paralysis, convulsions, stupor, etc., occurred in four cases, three of these ending fatally. A number of deaths have occurred from secondary hemorrhage between the 9th and twenty-second days after ligation. The third danger, septicemia, under modern surgery is of much less consequence. Pulsating angiomata should be dissected and malignant pulsating growths should be removed.

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One of Nelaton's cases was the result of a thrust of the rib of an umbrella; another case from a pistol shot fired in the mouth. Mr. W. Adams Frost reports a case in which both orbits were affected. A. Mills reports a case of varix in which he ligated the common carotid. All symptoms disappeared in three weeks, but the patient died suddenly some time afterwards. Cause of death unknown.

DISCUSSION.

DR. A. M. CARTLEDGE: I think it is unquestionably a traumatic aneurism due to an injury, but I do not think we can tell the exact location. I do not think I would try the compress, though I am aware that is given an important place in works on surgery, for I think we are growing away from that idea. I would make an incision for ligation of the common carotid high up and then determine the vessel upon which the compression should be made. If compression of the external carotid will control it completely, I would ligate that, and if necessary ligate the internal carotid. If compression of neither will control it, I would ligate the common carotid, which is the most desirable procedure. All our statistics prove that ligation of the common carotid is the most serious of these operations on account of the cerebral changes that might take place.

DR. AP M. VANCE: I agree with Dr. Cartledge perfectly that the common carotid will have to be ligated. I also agree with him about compression. I would advise this gentleman to submit to ligation of the common carotid. He will go from bad to worse otherwise.

DR. S. G. DABNEY: I was interested in hearing that the man's loss of sight came on gradually, for it frequently comes on instantly when it is generally due to bony fracture pressing the nerve. The prognosis in these cases is very bad. It is interesting to observe that the man could see for two or three weeks, so it was evidently the pressure of the aneurism that affected his sight.

DR. CHEATHAM (closing): It seems to me that the venous stasis here would indicate it to be a case of varix, but the treatment would be the same anyway.

NEW APPLIANCES.

DR. AP M. VANCE: I want to make a little demonstration of two original procedures. Some five years ago I demonstrated to this society a contrivance for the removal of silk ligatures, especially on the pedicle of the kidney. None of us have ever used anything but silk on the kidney and it acts as a foreign body in most cases. This is a platinum wire which is laid under the ligature at the time it is tied. At the proper time a galvanic current is applied and it burns through. It was not reported. Some months after my demonstration Dr. Cleveland, of New York City, did the same thing and got the credit for it.

I have recently thought out and put into practice another procedure for the removal of these ligatures which is much simpler. Here is an old silver catheter, No. 6, which I have cut off on the slant and sharpened on the long edge. When it is desired to remove the ligature, which is brought out of wound, tie a piece of silkworm gut and telescope it through this canula, pass the canula through the sinus, make the ligature taut, the knot is pulled into end of catheter. With a rotary movement the ligature is cut on one side of knot and comes away.

In the operation of staphylorrhaphy, Dr. Coomes' needles are the best to be used. The difficulty is to get the last suture in because there is so little tissue there, and the stitches tear out. I did a staphylorrhaphy the other day and got a beautiful result, as far as it went, leaving an opening about the size of a grain of wheat. It was in an acutely vaulted mouth, which made the introduction of a stitch very difficult, and I thought over it several days. Then I took an ordinary aspirator needle. I threaded into it a double silkworm gut, so the loop was just inside the point, passed the aspirator needle through the palate, then reached up and grasped the loop with a tenaculum. I then introduced it on the opposite side single, brought it down and put the single one through the loop of the first one, drawing the single suture through with the loop. With a very small opening in the palate, I tied without any trouble. I believe this

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would be an efficient way to put stitches in along the whole palate. This little needle makes a much nicer hole and the series of openings could be made right on down and the whole palate closed. It did not take me a minute to put the stitch in, without general anesthesia.

TRACHEOTOMY FOR EDEMA.

DR. T. C. EVANS: I have had a rather unusual experience. A week ago yesterday was called to see a man said to be in great distress for want of breath. I was told that Dr. Coleman had been attending him, so I drove by and we went out together. The man was 65 or 70 years of age and Dr. Coleman said he had diagnosed his case as edema of the larnyx. The distress had begun about 9 o'clock the night before and when I saw him the dyspnea was extreme and the patient was excited and cyanosed. I attempted to examine the larnyx with an ordinary lamp, but could not see beyond the epiglottis. The lower portion of the pharnyx was filled up, and he was unable to swallow even teaspoonful quantities of anything. The feeling of the epiglottis was exactly like that of a pessary. Dr. Coleman had prescribed the usual remedies, but the disease had progressed. I advised that we make a few incisions, which were accomplished by pushing the tongue down. It bled freely, but the blood and increased flow of saliva aggravated his distress and he became more excited and cyanosed. I did not think intubation would relieve him, but preferred that to a tracheotomy. I introduced a large rubber intubation tube without much difficulty, but found that the epiglottis seemed to act as a valve and he could not breathe at all. I withdrew it promptly and decided to do a tracheotomy.

I had two tubes with me, but in attempting to change the curve of the rubber tube I fractured it and had to depend upon the smaller tube. The patient objected to the operation under local anesthesia and said he would rather die. After he had taken two or three whiffs of chloroform the cyanosis became marked and he seemed to die away. I immediately made an incision through the overlying tissues and went directly into the trachea. I then passed my finger into the wound and succeeded in passing the point of the tube into the opening. The small amount of residual air seemed to come out through the tube, but no amount of artificial respiration seemed to fill the lung up any more. Finally, I put my mouth to the tube and inflated him with air, and we continued the artificial respiration until he came around all right. I remained there for half an hour and he rallied. I then went to the western part of the city, but was called back in haste and found that the tube had slipped out of position. Dr. Coleman was keeping the patient alive by holding the wound open with a pair of forceps. I introduced a pair of retractors, made a larger incision and put in a larger tracheal tube. During the second operation the patient had a distinct convulsion. He rallied and came around all right, but was very uneasy because he had lost his speech.

That was about five o'clock in the afternoon. Dr. Coleman went to see him between eleven and twelve and thought he would be able to sit up in the morning. He had no temperature at all. At three o'clock the next morning he suddenly began to sink, lapsed into unconsciousness and died at six. There was no return of the dyspnea and no evidence of cyanosis. It was found later that he had not passed his urine for eighteen or twenty hours before he died. I suppose the man had Bright's disease and died from suppression.

I will say also that during the time he was having the convulsion and the time the tube was out of position, he was given two small doses of morphine, a quarter of a grain each time, at his earnest request. He did not get enough of the chloroform to affect him at all.

This is the third case of acute edema of the epiglottis I have seen requiring tracheotomy. Both of the others recovered. From my experience I would say that what is called edema of the glottis is really edema of the epiglottis. With what little air this man could get in, he could articulate fairly well, and when I put my finger in there

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seemed to be no edema beyond the arachnoid cartilage.

DISCUSSION.

DR. WM. CHEATHAM: I have seen two of these cases before the days of adrenaline. One was thought to be typhoid fever and the patient died while waiting for the opinion of the physician with whom I was called in consultation. Another case was supposed to be syphilitic; he recovered promptly under tracheotomy. I think I would have tried adrenaline on Dr. Evans' case. I remember a case of a lady with edema of the epiglottis who was relieved very quickly. I applied it with a mop and then gave a spray. She had no kidney complications, however. I do not see what more Dr. Evans could have done than he did. Theoretically, adrenaline in an oil or glycerin should be more effective.

DR. S. G. DABNEY: This would seem to be a genuine case of edema of the glottis. I take it that the man had little acute inflammatory trouble of the larnyx, but that it was simply edema due to diseased kidneys. Like Dr. Cheatham, I wondered why the doctor did not use adrenaline, for I think it should be used even in extreme cases. It certainly has a remarkable effect. I had one case about three weeks ago of mild edema, and adrenaline acted like a charm. Another case (much milder than the one reported) about six weeks ago also responded promptly to its use. It is remarkable how great the edema may sometimes be and the patient yet get along without an operation when it is confined to the epiglottis. A few years ago I had a patient who had to be fed in the intubation position, with his head turned backward over a sofa. I made punctures in the epiglottis in that case, as it was before the day of adrenaline. It was astonishing to me how he could get in any air at all.

I take it that this case of edema was due to a pre-existing Bright's, and do not see what else could have been done, as the man did not die of laryngeal obstruction.

MASTOIDITIS.

DR. S. G. DABNEY: Last Sunday night I was called to Breckinridge county to see a lady reported ill with mastoid disease and told to bring a nurse with me. I got to Irvington at 10:30 and we drove sixteen miles in six hours. When we got to the house I found a lady of 42, with two physicians in attendance. One of them, who had had charge of the family for many years, told me that fourteen years ago the same patient had an acute attack of inflammation of the ear with mastoid involvement, and he had made a small opening with a gimlet, letting out pus, and she made a perfect recovery and had had no trouble since. About eight weeks ago she had an acute inflammation of the middle ear and it was neglected. Mastoid disease developed and opened itself and discharged near the tip of the mastoid. The discharge had stopped when I saw her and she had a swelling just below, with some tenderness over the mastoid. Temperature was about 100½, with some pain. She was reported to have had some delirium the day before, but I am inclined to think this was a mistake. On account of the healing of the drum and subsidence of the symptoms, I was of the opinion that it was one of the unusual cases that had taken care of itself—had been relieved by nature. Still, in view of the fact that the patient was so far from the operator and that the delirium the day before might have been a fact, I opened up the mastoid thoroughly and into the antrum, but found no pus. I found evidence of where the disease had opened there. I understand she is getting along perfectly well.

I mention it as an interesting case of a woman with inflammation on two occasions at an interval of fourteen years. I found the antrum very deep and very small, such as would suggest chronic inflammation, and she may have had a slight inflammation all these years, but the possibility is very remote. Both of the inflammations seemed to have involved the outer cells only. Politzer makes the statement that mastoid involvement in acute inflammations rarely involves the antrum, but is confined to the outer cells, and this would seem to have been the case in both instances in this patient.

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DISCUSSION.

DR. J. M. RAY: Bearing on this report, I had a mastoid case in mind. It had not been my experience to see them recover as perfectly as this case from so simple an operation as a gimlet hole. I have a case on hand now of a child brought here from West Virginia, nine years of age. Three years ago it had scarlet fever, followed by suppurative middle ear disease, which went on for a year and a half, then became acute, involved the mastoid, mastoiditis occurred, with swelling over the mastoid. The doctor made an incision and let out a lot of pus. The mother tells me "he scraped it down in there." He then packed the wound for a while and it healed up. The child was relieved for a time, but has had a number of attacks of earache, with swelling behind the ear. She was brought here with a temperature of 101, greatly emaciated, a mushy swelling over the mastoid and neck, with very profuse suppuration of the middle ear and the internal ear blocked with a mass of polyps.

I first removed the polyp and found it sprang from the back wall of the canal. After removal, I could feel the area of exposed bone and then I made the usual mastoid incision and found the whole mastoid process a mass of soft granulation tissue, with a very foul pus. I removed practically the entire mastoid, went into the middle ear, took away the back part of the canal and converted it into one cavity. I then brought the wound together behind, brought the incision into the meatus and packed it with gauze. There was so much bone disease there that I made a very much more extensive operation than in the ordinary radical operation. The wound seems to be granulating, all pain and fever are gone and she is doing very well.

DR. S. G. DABNEY: Dr. Ray's case is very interesting, but it belongs in the opposite class from mine; it was a chronic case, while mine was an acute suppuration. The interesting feature of my case was the two attacks with the long interval, one relieved by a simple mechanical operation and the other taking care of itself. Her temperature was never higher than 100½, with no septic symptoms whatever.

RUPTURED TUBAL PREGNANCY.

DR. L. S. MCMURTRY: This is a specimen of ruptured tubal pregnancy. The patient is 32 years of age and has one child about two and a half years old. She had her last menstrual period in August of last year and supposed herself pregnant, but had a return of the flow (as she supposed). Before this, however, on December 12, while engaged in ordinary duties, she was seized with violent pain in the abdomen, characteristic of ruptured tubal pregnancy, with symptoms of internal hemorrhage, shock and general collapse. She was placed in bed, with pulse feeble and rapid. Coincident with this attack came on what was supposed to be the menstrual flow. She remained in bed and suffered with symptoms of peritonitis; she was brought to the city last Sunday, and Monday I opened the abdomen and found at least two quarts of blood clot, a ruptured tube and all the pelvis choked with this debris of ruptured tube and blood clot, making a demarcation between the omentum and intestines above, and enclosing all this was a decomposing sac, greenish in color. The case was a very dirty one, but with normal salt solution, strychnia and whisky after the operation, she has done well.

The appendix was attached to the tube and was removed with the tube and ovary, the pelvis cleaned out, all bleeding points secured and the abdomen closed without drainage. She was running a temperature of about 101 degrees in the morning and 102 degrees in the evening when the operation was done. The temperature became normal after operation and convalescense was promptly established.

DISCUSSION.

DR. A. M. CARTLEDGE: An interesting feature of this rupture is the late history of certain cases of ruptured tubal pregnancies. I have been struck with the appearances we find in some of the delayed cases. I have operated on several cases of extra-uterine pregnancy where the rupture had taken place as long as five or six weeks prior to the operation and found such conditions as this. I have sometimes found recent blood in the center of the old

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clots. I do not think many cases of tubal pregnancy get well, but where they do not bleed to death primarily, they may get well. I look back now at two cases that I know were of that kind, though I did not know it then, and after a long course of low-grade, non-septic peritonitis with slow absorption, they got well. The temperature in this case would probably have precluded anything of the kind, because suppuration and death would have supervened. They all should be operated upon.

DR. LOUIS FRANK: We are all struck with the findings in this case, and these late cases are always interesting and show some very striking conditions. I think the findings will depend altogether upon what takes place in the tube at the time the symptoms first manifest themselves. I think a number of these cases will recover without operation, but they are not true rupture of the tube. Those which get well are rather cases of tubal abortion, probably incomplete at first, and gradually the decidual membranes are detached. When we have rupture of the gestation sac, the tube itself, unless the fruit is completely expelled, I hardly think they will recover, especially if a vessel of any size is interfered with; certainly not if the decidual membranes are not completely detached.

As to the cause, I think that is the most interesting part of the subject. I am inclined to accept Webster's view that they are due to reversions and not to inflammatory conditions in the tube. I hardly think the inflammatory theory can be maintained. Sometimes, the spermatozoa having gotten into the tube and constriction of the tube from some cause, this will serve to prevent the traveling of the impregnated ovum into the uterus, but I think impregnation occurs normally in the uterus itself. Whenever it does occur inside the Fallopian tube, we have a tubal pregnancy, and if this is any distance from the uterine end, it will remain a tubal pregnancy.

DR. H. A. COTTELL: I want to ask if there is such a thing as pelvic hematocele independent of the condition mentioned? Is that not really a ruptured tube?

DR. AP M. VANCE: I would like to mention a case I saw in the country several years ago. I was called there to see a young married woman, wife of a doctor, who had been married six months. The day before she had traveled about twenty miles with her husband and walked out in the lot with her sister, who proposed a race. She ran down the hill and was taken with a sudden pain and fell. She was taken into the house and I saw her 24 hours afterward. She was almost moribund and gave every evidence of intra-abdominal hemorrhage. She had missed two periods. Examination revealed evidence of bogginess in the cul-de-sac.

As soon as she got to the house and was put to bed, she had insisted on getting up for an evacuation from the bowels, which was unsuccessful. I diagnosed the case as extra-uterine pregnancy and declined to operate with the surroundings. I used saline per rectum and hot bottles and was surprised to hear that she made a recovery. I had made a vaginal examination and found no displacement of the uterus. I am sure it was extra-uterine pregnancy.

I had another case with Dr. Brandeis two years ago. The diagnosis had been made several weeks prior and operation refused. She had a secondary hemorrhage and shock and was a forlorn hope case. Just as the peritoneum was opened the three months' fetus jumped out. The clots in this woman were away up under the liver and those high up in the abdomen were as black as tar, lower down they were less ancient and in the pelvis I found fresh blood. I cleaned her out as thoroughly as possible and gave her saline. That was about one o'clock; she reacted somewhat, but about nine o'clock went down and I opened a vein and put in eight ounces of normal salt. Her lips got rosy and body got warm again, but she died. I think I drowned her with the saline, but it had a very beautiful effect primarily.

DR. MCMURTRY (closing): The discussion shows how much pathological and clinical interest attach to the subject. The experience of everyone who sees much of this class of practice will indorse the points elicited in the dis-

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cussion. Dr. Cottell alluded to an interesting feature of the subject; before we understood this condition and before Lawson Tait illuminated the entire subject, pelvic hematocele was misunderstood. We now know that hematocele is either a ruptured ectopic gestation or is an effusion of blood from traumatism into the peritoneum. A woman can, in her efforts to produce an abortion, produce such injuries by the use of instruments as to give rise to hemorrhage that will produce an hematocele. For years hematocele was treated by physicians expectantly and a large proportion of them recovered. Many terminated in pelvic abscesses; many of them presented the clinical picture of ruptured tubal pregnancy and recovered without operation at all.

Another point illustrated is the great variety of damage done. Whether it is due to the particular point in the tube or to the extent the chorionic vessels are involved, I do not know, but I am satisfied the hemorrhage varies all the way from a slight hemorrhage up to that described by Dr. Vance and others, where they died from internal hemorrhage before aid could be given them.

One other point I have thought of a great deal is unsettled. Mr. Tait taught dogmatically that whenever a tube ruptured in that part of the periphery of the tube away from the folds of the broad ligament, the patient would die of hemorrhage if intervention did not occur, and that all of the cases that allow the fetus to live and develop until viable occur in the leaflets of the broad ligament, that that part of the tube where the folds come together, if the rupture occurs between these leaflets, the hemorrhage will be restrained by the cavity of the broad ligament and in that way the fetus will survive this injury. Price says that he never has seen one that did rupture at the point mentioned by Tait. So I think there is some explanation of the moderate hemorrhage that occurs in some of the cases and the preservation of the fetus to full term has not yet been explained. These pregnancies are always tubal and never in the peritoneum or ovary. It is claimed that there are some cases of ovarian pregnancy, but many pathologists deny that such a thing exists.

Stated meeting, Friday, February 5, 1904, with Dr. Ben Carlos Frazier, President, in the chair.

UTERINE FIBROMATA.

Dr. L. S. McMurtry: I have exhibited to this society from time to time so many specimens of uterine fibromata that I do not propose to open up the subject in a general way, but only to exhibit two specimens out of the ordinary, presenting practical points of interest. The first, not a very large tumor, is an interstitial uterine fibroid removed from a young woman 28 years of age, married two years, had never conceived, who had suffered with uterine hemorrhage for over a year. When she came to my infirmary two weeks ago she presented all the systemic evidences of malignant disease with a moderately large and symmetrical uterine tumor. Being a nulliparous woman, there was no probability of disease of the cervix, and the hemorrhage evidently was from the cavity of the uterus. I curetted the uterus in the hope of getting something for the microscope, but that examination was altogether negative, there being no debris in the uterus to furnish any suggestion and no mucous membrane to be removed. I decided upon a complete hysterectomy, and found an unusual condition of the interior, something like a trabeculated condition. It was from here that the hemorrhage was coming. I have never seen that trabeculated condition before. These tumors present the most infinite variety of pathology and this condition is in my experience unique. I present the specimen to show how difficult may be the diagnosis between malignant and nonmalignant tumors of this variety. The microscope shows it to be a pure fibromyoma.

The second specimen also illustrates a point totally different from the ordinary. It was removed yesterday morning. It occurred in a woman with an abdominal wall four inches thick. Part of the tumor presented at the incision and this other large nodule occupied Douglas' space. The tumor was inter-

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stitial and sub-mucous, so there was no cervical pedicle at all. It was intraligamentous and could not be delivered through the abdominal incision, presenting exceptional difficulties in removal. The capsule would bleed whenever I would attempt to enucleate it, and to strip away posteriorly would invite the tearing of a large sinus. I pursued the plan of removing it by morcellation, having to proceed rapidly and take the chances. This specimen illustrates how this exceptional operative procedure may sometimes be necessary.

DISCUSSION.

DR. J. G. CECIL: I rise to mention one possibility in the way of removal that I had the pleasure of witnessing in Prof. Winckle's clinic. He delivered before the class a very large fibroid by vagina by the use of the Paquelin cautery. He would pull it down, cut off a slice, then pull it down again, and so on. It was done without any hemorrhage, but it took a long time. As Dr. McMurtry had no hemorrhage, his method was more easy and rapid, but if hemorrhage should be encountered, I should think Winckle's would be an excellent method of removal. He protected the vagina with retractors.

DR. CARL WEIDNER: In a tumor which is purely fibromatous, which has practically destroyed the membrane, I should think nothing would be obtained by curetting for the microscopical examination. I have never seen one exactly like this before.

DR. LOUIS FRANK: I can see how in these fibroid conditions we can have such disturbances on account of the fibroid changes as to prevent our finding the normal mucous membrane. In many cases there is a hypertrophy and the mucosa is very abundant, but very soft and succulent. On the other hand, we find a very brittle mucosa in malignant diseases, which is easily removed for examination. I have never before seen this trabeculation of the cavity of the uterus.

The second case illustrates some of the difficulties met with at times. In my earlier work I feared hemorrhage in this class of tumors, but I have since found that with traction on the uterus during removal there is very little to fear. The bugbear, severance of the uterine arteries, is not so great as supposed. In this case the thickness of the wall rendered the operation more difficult. This was a unique way of removing the specimen, and I should think Dr. Cecil's suggestion would prevent even more technical difficulties. In this class of tumors we have illustrated the advantages of the supra-pubic operation.

DR. MCMURTRY (closing): As to the suggestion made by Dr. Cecil, I may say that the Continental operators in Europe, especially the French, are afraid of supra-pubic abdominal section and prefer to attack the contents of the pelvis through the vagina. Among the Germans there are a few who do supra-pubic work, but in a very peculiar way. Martin sits down and brings the woman's thighs across his lap, with her limbs separated and her buttocks on the table. He operates on the abdomen in that position. The German operators generally seem to have gone at the matter of abdominal surgery in a very odd way. Their technique is thorough, but the German school of pelvic surgery differs from ours in many ways. The long incision for a small operation is one feature.

I have seen Segond operate for two or three hours for fibroid tumors per vagina, with an instrument something lige a corkscrew, pulling out plug after plug. After seeing him operate, one can readily appreciate the superiority of the American method.

LOUISVILLE SURGICAL SOCIETY.

Stated meeting, Monday, January 4, 1904, Dr. James Vance, President, in the chair.

CLINICAL CASE.

DR. W. R. BLUE: I present this patient in order to get information from the society as to what is best to be done. The history of the case in his own words is as follows:

"Name Thomas E. Buckley, age 28. In 1900, while in the United States service at Manila, in the month of September the trouble began with violent bearing down pains at the base of the

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bladder; was sent to Post Hospital and remained in that institution four weeks. Treatment: irrigation with some red solution, name unknown; got relief immediately and was sent back to company. Never was troubled any further until last February at Middlesborough. Was employed by the L. & N. shoveling and lifting very heavy rock. On the morning of February 16, 1903, the same symptoms returned with more violent pains than ever, with passing of blood and gritty sediment in large quantity and terrible pain. Arrived in Louisville February 28 and was taken to the City Hospital. The condition showed no change but great suffering until March, when an operation was performed by Dr. F. W. Samuels, March 14 at City Hospital, by making two incisions, one at the bladder and perineal section. Treatment: irrigation with solution of silver and salt daily until May 12. Places healed up, but symptoms were the same. May 24 was put under influence of chloroform by Dr. Hendon and had a slight operation with bougie instrument; got great relief for about two weeks, when I could hold about five ounces of water clear and free, until June 12, when the same symptoms appeared again whilst at the Galt House.

"Admitted to City Hospital and remained until August 9, when I went back to work and got bad again; quit hotel September 27, came to St. Anthony's Hospital on 28th. October 7 ordered to bed, pulse 115, temperature 104 1-5. The following day abscess formed at bladder and incision made by Dr. Summers, interne. The symptoms disappeared. Staid in bed until October 19 and was examined by Drs. Blue and James. The following day they operated by making two incisions, one above and perineal section; rested easy until the ninth day, when the symptoms returned with violent bearing down pains and passing of blood. Got out of bed November 8 and returned to hotel December 10; felt good up to 23d. Returned to St. Anthony's with terrible pains and passing of sediment and clotted blood. At present slight pain in region of bladder, with continual desire to urinate. Amount of urine about one-quarter of an ounce and a terrible odoriferous scent.

"P. S.—Prior to March 7, 1894, a similar operation was performed at Good Samaritan Hospital in Cincinnati by Drs. Connors and Molloy."

It was my intention to go into this man's bladder supra-pubically, sink a caisson and illuminate it to see what the condition was, it being too small for a cystoscopy. My incision carried me into the peritoneal cavity. I passed my hand into the wound and the bladder felt about the size of a large rubber ball, smooth and without nodules. He was passing very foul urine at the time, so did not care to do an intra-peritoneal operation, which might have cost him his life. I did a perineal section with the result already stated.

The question now is, What is his trouble? He had gonorrhea eight years previously, but without history of passing blood. The case recalls to me one I saw operated on in St. Petersburg in 1900 with a diagnosis of calculus at the bladder end of the ureter. A supra-pubic operation was performed, the stone removed and recovery resulted. I would like to know what to do for this man. At the last examination his urine was found loaded with pus, etc.

The operation in 1894 was on account of frequency in passing water, which was being passed every fifteen minutes. He had gonorrhea in 1892 and said he got well in three weeks and had no more trouble until 1894. Had no other case of gonorrhea and was in good shape for six years after the operation. Connor suspected a stone, but failed to find it, operating below.

There are no renal derivatives in the urine, but it is loaded with pus and phosphates. His prostate is slightly enlarged and sensitive.

DISCUSSION.

DR. I. N. BLOOM: It is impossible to make a diagnosis now, as the case is masked by three previous operations and it is impossible to state what he had in the beginning. To find the cause we would have to go back to the beginning of the gonorrheal discharge. The prominent symptom was that of

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frequency of urination, and this is referable to the neck of the bladder or prostate. Connor evidently thought the cause was in the vicinity of the neck of the prostate. The man is already 28 and has no enlargement of the prostate to be considered, except as the result of disease, which might be chronic inflammation of the prostatic urethra. All this is guess work. He does not look as if he had tuberculosis, which would account for similar symptoms, but not so severe. An interesting feature is the intermittency. The present condition of the urine is no indication of what was there in '94 or afterward. The presence of the phosphates could be accounted for by the alkaline urine, and may be the result of infection as a result of the operation. To make a diagnosis now would be impossible.

As to treatment, with an atrophied bladder, I do not see anything but permanent drainage, which would give him more relief than anything else. With the small size of the bladder, I should think the only thing would be to make a perineal fistula or a perineal tube. A man who evacuates his urine every few minutes leads about as miserable a life as it is possible to live. I would suggest off-hand that perineal drainage would be the best thing.

DR. H. H. KOEHLER: We are dealing here with an infected bladder, and to my mind it presents certain features of tuberculosis. Of course, drainage is the only thing and the perineum is the only way. To pass the urine every three minutes is a hell on earth, and anything is preferable to that.

DR. AP M. VANCE: From the man's history, it seems to me there has been an element of foreign body in the case prior to the first operation. He reports passing pieces as big as the heads of two pins. There must have been some kidney or prostatic stone or something of that kind. I do not understand why nothing has been found in the bladder. Something must have gotten into his bladder, though it does not appear in the history. My idea would be to try and stretch his bladder by hydrostatic pressure and see if examination could be made. That would do good in allaying the irritation. Then I would investigate the bladder as far as possible and the urethra by a supra-pubic cystotomy and X-ray, and see if I could find any stone in the kidney. The granules of gritty matter must be coming from somewhere. I think I would put him on his back and tie his penis and dilate his bladder. I think hot saline is the best application to mucous surfaces anywhere.

DR. BLUE (closing): I want to say that for the last three weeks I have tried to distend his bladder, but could never get it beyond four ounces, and then this frequent desire to urinate would come on with hemorrhage. Undoubtedly the triple phosphates will in time form a calculus or cover the entire bladder wall.

I do not believe perineal drainage will benefit him. He got relief from the perineal operation for a time, but there was a great deal of spasm, and the tube was forced out. I cannot believe his condition is tubercular.

I might add that Dr. James irrigated the patients' bladder daily for two weeks with a 5 per cent. solution of argyrol, with no change whatever in the patient's condition.

PROSTATECTOMY AND CALCULUS.

DR. AUGUST SCHACHNER: A week ago I did a prostatectomy on a man of 74, who had been suffering for forty-two years. He has passed two or three small calculi. I saw him the day before the operation. I did a perineal prostatectomy, using Young's tractor. After the two lobes were enucleated we removed five calculi. The operation lasted twenty-nine minutes and about five minutes were lost in getting out the stones with forceps. The man was propped up in bed at the end of 24 hours and on the fourth day got out of bed with some assistance. Since then he has been on his feet. The drainage tube was left in for 36 hours. I also brought with me a perineal retractor that Parker Sims has been using. This is introduced on a sound, then filled with sterile water and used to drag down the prostate.

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DISCUSSION.

DR. AP M. VANCE: I think it is a very fine report. I have never done a prostatectomy, but have always treated them conservatively. The reports recently have been so favorable that I am beginning to think the operation is justifiable.

DR. SCHACHNER (closing): Since the operation he has twice passed small quantities of urine through the urethra, about an ounce at a time. I have been irrigating him every day through the perineal incision and to-morrow I expect to irrigate through the urethra. He had been using a catheter for some time. When I was called in the day before, he had for some reason a distended bladder and was treated by washing out the bladder.

There are some features of prostatectomy that are not yet settled. Practically there are only two incisions, the vertical and the V incision. The Y-shaped incision is not a good one because the stem of the Y carries you away from the point of operation into the bulbous part of the corpus spongiosum. When the subject is thin, the central incision carried into the prostatic urethra enables you to get into the capsule. If it is a fat subject, the V-shaped or curved incision would be preferable. The incision made here was not longer than two inches and I was successful in entirely avoiding the bulbous part of the corpus spongiosum, which I did not do in a former case. Dr. Young calls attention to the fact that the Y-shaped incision is not a good one for the reason stated.

Of course this tractor is imperfect. It was given me by the assistant of Dr. Sims. He makes a median incision, then introduces a sound and carries it through the membranous urethra, distends it with sterile water and clamps it and pulls down the prostate. The operation is done largely under the guidance of the eye. I could see about half of what I was doing, but I believe I could have pulled it down even more.

PROSTATECTOMY.

DR. AUGUST SCHACHNER: This patient was 60 years of age and was operated on about two weeks ago with the diagnosis of enlarged prostate. By rectal examination I could make out what I took to be the enlarged prostate. He had three ounces of residual urine. The median operation was done. I got down to the capsule and into its cavity and broke up into ragged fragments a mass contained therein, but really got away nothing. Some pieces sloughed away. In the other two cases operated on, the prostate shelled out easily, but this one did not. There are some cases in which it must be nibbled away. I have not been able to make up my mind whether this was really a prostatectomy or not. The stone exhibited came from the bladder.

DISCUSSION.

DR. AP M. VANCE: I had an old man come to me once from Texas, Ky., with bladder trouble having existed for five years. I made a diagnosis of stone in the bladder, which you could feel as plainly through the rectum as you can feel the uterus. The stone weighed 1,460 grains and I took it out suprapubically.

DR. I. N. BLOOM: I was glad of an opportunity to see this prostatectomy, though I saw it only on the table, and was delighted with the technique. I did not feel the prostate before the operation, but after the bladder was opened I made the attempt, but did not feel the enlarged prostate. If he had used the modern cautery method, I think he would have found nothing that could have been burned. It was evident that there was a prostatic tumor there. I believe we can get a moderate amount of residual urine from other cases than those of enlarged prostate, but I see nothing else in this case that could have been done. The man seemed to be in good condition and I believe he will be relieved.

DR. W. R. BLUE: It was my pleasure to witness this operation. Some years ago Collins of Hot Springs called attention to the colored race and those with negro blood in them, stating that they seemed to be exempt from locomotor ataxia and also from varicocele

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of the spermatic veins. From that time I began to examine the aged colored men at my clinic for enlarged prostate, and during the ten years I was there I never met a case of hypertrophied prostate in colored men or octoroons.

It is my opinion that this stone was partially encysted.

TRI-CHLORO-ACETIC ACID IN EAR DISEASES.

DR. S. G. DABNEY: I want to report an agent I have been using for a year with great satisfaction in perforations of the drum membrane. The case which led me to investigate it was this: A business man of this city who has been deaf in his left ear for many years came to consult me. He is about 45 years of age and occupies a position where it is important for him to hear. A year ago he went to Colorado, where he had a sudden discharge from and deafness in his good ear. He returned to the city and during my absence consulted another gentleman, who discovered a large perforation in the drum membrane. He checked the discharge with boric acid and gave a doubtful prognosis. On my return he came to me and I kept up the treatment, but gave him little promise of healing the perforation. The treatment then being used was carbolic acid; the discharge ceased, but the perforation remained. Having occasion to go to New York City twice a year, I sent him to consult a very eminent man there, and when he saw him the discharge had started up again. The doctor was very hopeful of curing the case and wrote me a note, but suggested nothing new except the use of argyrol instead of nitrate of silver, but it had no result.

About that time Politzer's new edition came out. Politzer was very enthusiastic about tri-chloro-acetic acid to heal old perforations and I began its use. It has served me admirably in many cases since. This patient was very insistent on treatment and kept coming back, until finally the whole perforation healed up and his hearing has improved. I mention the agent because of the excellent result. I applied it in full strength to the edge of the perforation to stimulate granulations, preceding it with a 10 per cent. solution of cocaine on cotton, renewing the application every five or ten minutes. The edge was touched with the acid by means of cotton on a probe. There was very little reaction.

DISCUSSION.

DR. ADOLPH O. PFINGST: I feel that Dr. Dabney's report is very encouraging. Either these cases that leave a permanent perforation of the drum are not as common as the books make out, or else I have been fortunate in not meeting with them. I have seen but two where there was a permanent opening after the discharge had ceased. Most of the recent perforations heal up without any local treatment at all. I have used chromic acid in the two cases mentioned with the same results as in Dr. Dabney's case.

DR. DABNEY (closing): The immediate cause of this man's perforation in the right ear seemed to be the altitude. He had no trouble whatever preceding this and it came on suddenly. It seemed to be a rupture of the drum and infection took place after the rupture. He did have some little trouble in both ears previously, but the left ear was the worst by far. He did not have the usual suppuration of the middle ear at all. Fully one-third of the drum membrane was destroyed. I think he went to Pike's Peak.

CONTINUED REPORT OF CASE.

DR. W. R. BLUE: Some of the members will recall my report of a case which had been operated upon several times without benefit. I did a median operation and illuminated the bladder as well as I could. There was not much hemorrhage, but the capillary oozing prevented me from finding the ureter. I got away a great deal of mucus in which phosphatic granules were imbedded and then injected a four per cent. nitrate of silver solution. Spasm came on again after three days, and we had to remove the tube; he is now in the same condition he was before the operation, having a desire to

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pass his water every few minutes. I think there must be some involvement of the ureters and kidneys. It is very unusual to have a spasm under these conditions. I could not find the ureters because the bladder was so contracted.

DR. AUGUST SCHACHNER: I do not see any objection to making an abdominal incision to see the condition of things. Dr. Blue has done almost everything else. I would do a laparotomy.

THREE CASES OF SYPHILIS.

DR. I. N. BLOOM: I want to report three cases which I have seen in the last ten days. The first was in a young man from Florida with syphilide eruption and adenitis over the entire body. The cervical glands were very much enlarged and inspection of of the mouth showed a suspicious sore on the tonsil, of which I have seen six or seven cases. Cross-examination on the part of the family physician and myself failed to elicit any cause for the disease.

The second case was also a chancre in a woman of 35, contracted two years ago in the dentist's chair. In September of that year a sore developed at the angle of the mouth, involving both lips. It persisted for two months and a cicatrix formed, shortening her mouth and causing a growing together of the lips on that side. She came to me with a deep mucous patch, the epithelium being eroded on the side corresponding to the affected part, near the corner of the mouth. She had gone to Dyer of New Orleans and was under syphilitic treatment until January 1. She was then pronounced cured and stopped medication, and then this mucous patch appeared. I put her back on the iodide and she has improved.

I saw the third case in consultation to-day. A married man of 35 went with a friend to Indianapolis and had connection on November 18. On January 18 a chancre appeared, 61 days being the period of incubation. Strict catechism failed to elicit any other possible source of infection. The longest period prior to this where I could speak with equal certainty was 31 days. I have hitherto been very skeptical about the long periods mentioned.

DISCUSSION.

DR. H. H. KOEHLER: I have seen nothing approaching that. I think extra-genital chancres are more common than we are taught to believe. All I have seen were around the mouth.

DR. W. R. BLUE: I do not recall ever seeing a case where the period of incubation had been as long as 61 days, but I have had them where it had extended over 40 days, according to their statement. Hutchinson gives the average as 35 days, but my average has run about 21 days.

As to dental instruments, two years ago I read a paper before the State Dental Society on the importance of the sterilization of instruments, especially those known as "scalers." These instruments invariably produce hemorrhage, and I suggested a quick way of sterilizing them, though I had advised boiling all instruments. There was only one man present who had interest enough to come to me and ask me to explain the method. The surprising thing to me is that dentists do not infect more people.

A few weeks ago a gentleman consulted me with a chancre of the lower lip without any history of exposure. He claims that drinking from a beer mug is the only possible explanation. Of course, this is to be taken with a pinch of salt.

DR. S. G. DABNEY: I saw Dr. Bloom's first patient and the tonsil was somewhat enlarged and inflamed. I do not think there can be any doubt but that it was the original source of infection. I have seen about five chancres of the mouth. One was in a young lady whose family physician happened to be treating her fiance for syphilis. She had a chancre with an extensive ulceration of one tonsil. The other cases were all in young men.

I saw some years ago a trained nurse in this city with syphilitic disease of nasal septum. The nose was greatly swollen, her face red and there was a little rise of temperature. Pus had formed in the septum and bulged it out. The only source of infection was

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a lesion at the corner of the mouth, and I believe it was an extra-genital chancre.

I would like to mention a somewhat odd position a family physician took in a case some time ago. A lawyer of some prominence in another city, married, consulted me for a sore of the mouth. I told him he had syphilis and he was greatly astonished. He said his physician had never mentioned it. He was greatly distressed about it. I wrote to his physician and told him I had told the gentleman. He wrote back that he knew it was syphilis, but that I had no business to tell him. The case is fresh in mind because he came to see me last week and said that the doctor was very indignant.

Dr. Adolph O. Pfingst: I would like to ask as to the advisability of waiting, in these primary cases of syphilis of the mouth, until the eruption appears before beginning treatment. As to extra-genital chancres, it might be of interest to cite two cases. One was in the clinic of Dr. Myles Standish of Boston. A tramp whose eyelid was injured on the road was dressed in a roadhouse and developed a chancre of the eyelid. Another case was an infection of the naso-pharnyx by an Eustachian catheter which had not been sterilized, having been merely dipped in carbolic water.

Dr. W. O. Roberts: All the extra-genital chancres I have seen have been on the finger or on the lip. I have seen several cases develop where men had been hit in the mouth. Every chancre of the lip I have ever seen has been on the upper lip. I have had two in old men, one past seventy. I was thinking of operating on him for epithelioma, but remembered that it was rarely on the upper lip. I stripped him and found an eruption all over the body; he got well under anti-syphilitic treatment.

I had another case in an old man of chancre of the upper lip from the use of a pen.

Dr. Ap M. Vance: I have seen a number of these cases. I saw nine in one year, four on the hand, one on the tonsil, one on the breast and three on the lip; one of these was on the lower lip.

I saw this woman of Dr. Dabney's after he saw her. There was a gumma which had gone on to ulceration and I saw the peculiar saddle-nose; this was six months after the chancre. I treated her for five years and she has since married and has a healthy child. That was the most rapid case I have seen; she had cartilaginous destruction of the nose within three months.

Dr. S. G. Dabney: I think the infection from chancre of the mouth follows much more rapidly than other parts of the body.

Dr. Bloom (closing): In twenty years I have reported about fifty cases of extra-genital chancres, and that is not all. I cannot believe that they are so common as Buckley says, ten per cent. The prettiest case I ever saw was a chancre of the nipple. It was interesting on account of the immense inflammation all around it with an immense area of induration. Dr. Yandell suspected it from the beginning. All of the neighbors knew of the disease, for it had been diagnosed cancer of the breast. Her doom was foretold, but the chancre disappeared after a few weeks and I got a fine reputation as a chancre doctor.

I have a picture of a blacksmith who was struck in a fight. Another was a case of chancre of the tongue, followed by the severest trouble I have ever known. He was from New York City and had a recurrence of iritis. I have seen a chancre of the toe resulting from being bitten on the toe in a tramp lodging-house. There is no part of the body where they do not appear. I never saw but one case due to bestial methods of coition. This was a very pretty Jewess who came to our clinic after our hour was over, and Dr. Yandell remarked that it was singular such a well-dressed woman should come to a public clinic. There were several of us then present and she said she had trouble with her rectum. On separating the buttocks we saw a wellmarked chancre. We got the history that she had been married a year and her husband did not want children and wanted to have intercourse per rectum, and she had submitted under protest.

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In the last six years I have seen more extra-genital chancres than in the previous twelve years. I have seen two in the last ten days. I think the period of first incubation is from 17 to 23 days, rarely over 25 days, and only one of 31 days in my practice, the latter occurring in a young fellow who had contracted gonorrhea, and this was the last intercourse he had had. He disappeared after two years and a half, when his bill was due.

There is no concensus of opinion about waiting for the secondary eruption, except that where the chancre is a source of annoyance, with a diagnosis possible, treatment should be begun. I would be afraid to say how many chancres of the lip I have seen, but none of them gave much trouble. As a rule, it is best to wait for certainty and it has been maintained that the late forms occur with greater severity where chancres are treated early. Where disfigurement or possible disability exists it is best to begin treatment at once and if the chancre disappears it is pretty good evidence of the genuineness of the disease.

LOUISVILLE ACADEMY OF MEDICINE.

Regular meeting at Seelbach's Hotel, Wednesday, March 2, 1904, with the President, Dr. W. F. Boggess, in the chair.

T-FRACTURE OF THE HUMERUS.

DR. JAMES B. BULLITT: This young man sustained a serious injury to the elbow joint about four months ago in rather an unusual way. While running he fell forward and caught his weight on the hand. The fall produced a serious effect upon the elbow. It has gone along for four months and presents the most extensive injury of the kind that I have seen. About a month ago he was put under an anesthetic and the arm was broken up again. The contour of the two arms looks very much alike, but the forearm is set out further than it should be. His arm is quite tender and there is a decided bony prominence on the inner side, which is somewhat movable. I will now show you the radiographs and you can see that it is a T-fracture of the humerus. You will observe the two fragments displaced.

This is one of those cases where the surgeon would have been justified in the first place in cutting down on the joint and making the reposition under his eye, or removing the pieces of bone. At this time, it is a question just what should be done. It is manifest that one fragment of bone should be removed before it cuts through the skin, but it does not seem probable that any hope can be entertained for his getting a functionating joint. The operation will consist of a resection to get rid of the fragment. It does not seem wise to let the boy go on in his present condition or to attempt to force the bones back in place.

DR. T. L. BUTLER: This case shows that there are many of these fractures which cannot be properly diagnosed without the aid of the X-rays. It also illustrates better than any case I ever saw the fact that you cannot make a diagnosis from any one skiagraph. One of these pictures seems to indicate that the injury to the elbow is very slight. From another standpoint it seems to be broken all to pieces.

I do not believe anything can be done except to remove the fragment, which acts as a foreign body. This may do away with the superficial inflammation existing. By passive motion, he will probably get a more useful arm in time, but I do not believe it is a case for radical procedure.

PULSATING EXOPHTHALMOS.

DR. F. T. FORT: Some have seen this patient exhibited by Dr. Vance elsewhere. He fell from a water tower on November 13th, a distance of twenty or thirty feet, and struck on his head. He was carried to a hospital and remained unconscious for about eighteen hours and partially conscious for three or four days. The eye began to bulge and later he had noises in his head. Whether this pulsating exophthalmos developed at the time of the injury or subsequently, I cannot say. He went

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to his home and later was brought to New Albany, his trouble increasing. Then he went to an eye specialist, who wanted to enucleate the eye; then he went to Dr. Cheatham, who referred him to Dr. Vance. Finding him to be a railroad man, Dr. Vance referred him to me, suggesting operation. A month ago he ligated the common cartoid artery. Before the operation you could hear the bruit by applying the ear to any part of the skull, which was probably due to rupture of the internal carotid into the cavernous sinus. After the ligation the bruit ceased, it being very slight the last time I examined him.

It is a rare condition. One authority gives a report of 49 cases, with 33 cures, seven deaths, three partially benefitted and six without benefit at all. Another authority gives 44 cases in all. Ligation of the common carotid is given as the only cure.

DISCUSSION.

DR. J. B. BULLITT: This is a case of great rarity and it is interesting to realize that it is possible to make a diagnosis and effect a cure. I am very much surprised that ligation of the common carotid should have any beneficial effect. The anastomosis of the blood vessels supplying the brain is so very free that it would seem the blood would go around another way. However, the improvement in this man and the history of the other cases would disprove any theory and give ground for further improvement in this man.

DR. FORT: In taking the man's temperature, I was surprised to find that the thermometer registered a degree less on the right side of the tongne than on the left, and this relation never varied. It was about ten days before the temperature was the same on either side. I think there must have been some little disturbance of the heat centers, for after he went back to New Albany and returned I found him with a little temperature. For a few nights after leaving the infirmary he said he could not rest on account of the noises in his head, but I think these were partially imaginary, for he improved under strychnia. For two or three months these noises had made life miserable for him.

X-RAY STEREOSCOPE.

DR. J. B. BULLITT: This is a pattern of the Wheatstone Stereoscope. With the ordinary refracting stereoscope you have two lenses and two images. As you look at each separately, they look exactly alike, but are taken at different angles. The difference between the monocular and the binocular vision is that one makes the object appear as a flat surface, the other gives you the idea of the third dimension. The apparatus consists of two central mirrors placed at right angles to one another so that each eye sees its corresponding plate. The two images are thus exactly superimposed, giving you two aspects of the plate instead of one. When you take a picture through the hand, by turning the plate around, you can see the opposite side of the object, which is a very curious phenomenon.

McKenzie Davidson of London has laid stress upon this stereoscope in determining the location of a foreign body and telling its depth. That is the practical application of it.

Correspondence.

Owensboro, Ky., February 8, 1904.

Editors LOUISVILLE MONTHLY JOURNAL OF MEDICINE AND SURGERY:

Gentlemen—In a recent publication you have inadvertently committed a mistake, not only against Dr. Hoover and myself, but against a majority of the physicians of Owensboro and of Daviess county.

We have not, at any time, been members of the *Daviess County Medical Society.* The differences came up in the local *"Owensboro City Medical Society"*—not in the county society. I withdrew from the local society in August, 1900, and at no time have either one of us ever applied for reinstatement in the aforesaid society. We were kindly invited to join the *County Medical Society* and our applications were defeated by members of the Owensboro City Medical Society. Respectfully yours,

J. T. TOWNSEND.

510 St. Ann street.

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Louisville Monthly Journal

OF MEDICINE AND SURGERY.

"Alis Volat Propriis."

VOL. 10. LOUISVILLE, APRIL, 1904. NO. 11.

EDITORIAL STAFF

JOS. M. MATHEWS, M.D., LL.D.
A. M. CARTLEDGE, M.D.
H. HORACE GRANT, A.M., M.D., BUSINESS EDITOR.
HENRY ENOS TULEY, A.B., M.D., ACTING EDITOR.

EARLY SIGNS OF PREGNANCY.

Under this caption, Dr. H. L. E. Johnson of Washington contributes an article to a recent number of the *Journal of the American Medical Association,* descriptive of signs peculiar to pregnancy prior to and including the third month, being present as early as the fourth week. It consists of an intermittent softening and hardening of the vaginal portion of the cervix uteri with, in many cases, a change of color, from a pale violet to the normal pink hue, or the reverse. These changes in consistence and color are rhythmic, more or less. The alternate softening and hardening is easily detected by digital touch, while changes in color may be seen through a speculum.

These signs or processes are, in all probability, early manifestations of what is subsequently recognized as the intermittent contractions of the pregnant uterus, and are probably due to a necessity for some change or modification in the uterine circulation incident to the nourishment and growth of the impregnated ovum through physiologic intermittent congestion of the generative system.

Hegars' sign, while easily elicited by some, is not easily found by the rank and file of practitioners, while this one described should be easy to see if present.

MEDICAL REPRESENTATION ON THE PANAMA COMMISSION.

The National Legislative Council, composed of a delegate from each State Medical Association, at its regular session in Washington, D. C., February 11, memorialized the President to appoint a physician on the Panama Canal Commission, and that Colonel William C. Gorgas, Surgeon United States Army, be appointed to that position.

The law provides that of the seven Commissioners four are to be engineers. In their communication to President Roosevelt, attention is called to the fact that failure of the previous attempts at building the canal failed because of the frightful mortality among officers and laborers in charge of the work.

The position of the Council is most admirably taken, and we sincerely trust their efforts may result in the appointment of Major Gorgas on the Commission. The profession of the country should use their individual influence to accomplish this end.

Col. Gorgas is but fifty years of age and has vast experience with tropical diseases, and has twice been seriously ill in the service, once with yellow fever in 1882 at Fort Brown, Texas, and of typhoid fever in 1898, contracted in Cuba. To him is due the eradication of yellow fever from Cuba, Congress promoting him March 9, 1903, to Colonel and Assistant Surgeon General in recognition of this service.

The announcement has just been made that the members of the Commission are to receive $12,000 annually and $15 per day extra when in Panama.

It seems, however, that the President has made up his mind in regard to the personel of this commission, and no medical man will be appointed.

Should a vacancy occur at any time the medical profession should not rest until their end is accomplished.

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Notes.

At the annual meeting of the Louisville Academy of Medicine the election of officers resulted as follows:

President: Dr. Oscar E. Bloch.

Vice-President: Dr. B. F. Zimmerman.

Secretary: Dr. George Robertson.

Treasurer: Dr. Gavin Fulton.

The Gray-street Presbyterian Infirmary held the annual commencement exercises of their training school for nurses March 15th at the Hospital College of Medicine. The following is a list of the graduates: Misses Frances Gilmore, Katherine M. Arnold, Lulu B. Evans and Effie L. Duncan.

Dr. James M. Holloway has recently returned from New York City, where he went to attend a dinner given by Dr. D. B. St. John Roosa.

Dr. Wm. Porter, in the February *Medical Mirror*, calls attention to the secretary of the new publication company now issuing that publication. He is the son of the late Dr. I. N. Love, Hodgen Love, and is conducting the journal in a thoroughly ethical and progressive manner. We trust it may continue to succeed well and prove a valuable asset to the estate of its former versatile editor.

Governor Beckham has made the following appointments, which were ratified by the Senate before its adjournment: To the State Board of Health, Drs. J. M. Mathews, Louisville; Geo. T. Fuller, Mayfield, reappointed for six years; Dr. F. O. Young, Lexington, vice Dr. L. L. Robertson, Middlesboro, resigned.

Visitors to Central Asylum for the Insane, Drs. M. K. Allen, B. W. Smock, W. C. Vander Espt, of Louisville.

At the annual meeting of the Alumni Association of the Louisville Medical College, presided over by Dr. W. B. McClure, of Lexington, the following officers were elected for the ensuing year: President, Dr. A. E. McKay, of Bardstown; Vice Presidents, Dr. J. C. B. Foster, of Monterey, Ky.; Dr. A. J. McDonald, of Bedford, Ind., and Dr. J. Harvey, of Copper, Ky. Secretary and Treasurer, Dr. A. O. Pfingst, of Louisville.

The bill changing the names of the insane asylums to hospitals is a good one and should have been passed long ago. It has, however, been vetoed by the Governor.

The Oakland Chemical Company has issued a monograph containing the latest and most reliable therapeutic information on peroxide of hydrogen. It contains excerpts from many periodicals and will be found of interest and benefit.

Statements from reliable authority lead us to the conclusion that there is no diphtheria antitoxine combine. Parke, Davis & Co. state the change in prices is a reduction and not an advance. This firm produces only one style of serum now instead of two, as formerly.

Hinds & Noble of New York have issued a little publication they entitle the *Instantaneous Arbitrator*, which is an ingenious arrangement for ready reference of parliamentary law. They send it on approval, returnable if not approved.

Regular monthly meeting Bourbon County Medical Society Thursday, March 10, 2:30 p.m. "Varicose Lucer," Dr. A. C. Wilmott; "Third Stage of Labor," Dr. W. M. Miller; "Neurasthenia," Dr. Silas Evans. C. G. Daugherty, Secretary.

Book Reviews.

Diseases of the Eye.

By L. Webster Fox, A.M., M.D., Professor of Ophthalmology in the Medico-Chirurgical College of Philadelphia, Pa.; Opthalmic Surgeon in the Medico-Chirurgical Hospital. 1904. New York & London: D. Appleton & Co.

We are struck with the arrangement of this book, as being admirable for the use of the general practitioner. First is discussed the development and anatomy of the eye, and its diseases

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are described according to the structures attacked in the order in which they are encountered in going from without inward.

Glaucoma, Sympathetic Ophthalmia and Roentgen Rays in Locating Foreign Bodies in the Eye are considered.

The chapter on the "Relation of Ocular Affections to General Diseases" is one of interest to the general practioner and is dealt with in a very full manner. Ample space is devoted to "Refraction," for the use of the practioner, but hardly full enough for the specialist.

* * *

SAUNDERS' MEDICAL HAND-ATLASES.

Atlas and Epitome of Operative Gynecology.

By Dr. O. Schaffer, of Heidelberg. Edited, with additions, by J. Clarence Webster, M.D. (Edin.), F.R.C.P.E., Professor of Obstetrics and Gynecology in Rush Medical College, in affiliation with the University of Chicago. With 42 lithographic plates in colors, many text cuts, a number in colors, and 138 pages of text. Philadelphia, New York, London: W. B. Saunders & Co. 1904. Cloth, $3.00 net.

This is a valuable addition to this admirable series, the illustrations being the best we have ever seen. They are based on hundreds of photographs taken from nature. The text follows closely the illustrations, describing the various steps of the operation as depicted.

* * *

A Text-Book of Legal Medicine and Toxicology.

Edited by Frederick Peterson, M.D., Chief of Clinic, Nervous Department of the College of Physicians and Surgeons, New York; and Walter S. Haines, M.D., Professor of Chemistry, Pharmacy, and Toxicology, Rush Medical College, in affiliation with the University of Chicago. Two imperial octavo volumes of about 750 pages each, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Co. 1903. Per volume: Cloth, $5.00 net; Sheep or Half Morocco, $6.00 net.

This volume of this work has been, for convenience, divided into two parts, Part II. being devoted to a consideration of Toxicology, and all other portions of legal medicine in which laboratory investigation is an essential feature.

The list of contributors to this volume embraces the names of the most distinguished men in the profession, a guarantee that the work is all that is claimed for it.

The most entertaining and instructive parts of this volume are the chapters relating to the Legal Aspects of Pregnancy, Birth and Legitimacy, Abortion, Infanticide and Rape. Dr. Moyer contributes an interesting chapter upon "The Medico-legal Relations of the Roentgen or X-Rays," taking up the interpretation of skiagraphs, court decisions, X-ray burns, etc., which are of so much interest to so many practitioners now.

The whole work is interesting, entertaining and valuable, containing the latest thoughts upon this important subject.

* * *

Obstetrics for Nurses.

By Joseph B. DeLee, M.D., Professor of Obstetrics in the Northwestern University Medical School, Chicago; Lecturer in the Nurses' Training Schools of Mercy, Wesley, Provident, Cook County, and Chicago Lying-in Hospitals. 12mo., of 460 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Co. 1904. Cloth, $2.50 net.

This is a most complete little book, the only criticism which we could offer being that it is too complete for the use of the nurse, whose needs are not those of a medical student. For instance, we could not advocate the minuteness with which the question of the percentage method of milk modification is gone into. A nurse should know how to modify milk according to prescription and direction; it is not her province to "be able to prepare milks of any percentage, in order to feed an infant throughout its first year."

The illustrations, for the most part entirely original, are excellent. We doubt the usefulness of the old pictures, such as *A Caesarean Section in the Sixteenth Century,* in a work of this kind.

The book is a valuable addition to a nurses' library.

* * *

The Worth of Words.

By Dr. Ralcy Husted Bell, with an Introduction by Dr. William Colby Cooper. Third Edition, Revised and Enlarged. Hinds & Noble, Publishers. New York City.

That "elegant diction is charming," as Dr. Cooper says, cannot be denied; also that "Words being the red cor-

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puscles of language, it follows that the smaller one's language is the more anemic will be his brain's children."

It is the proper use of words, whether new or old, that the author cries for, that their precise meanings should not be mutilated and confused.

Among the subjects considered are Misused Words, Vulgarisms and "Words-no-Words," Everyday Errors, Slang and How Word Meanings Change.

The chapter on Slang is especially interesting—the large number of slang expressions and words are astonishing.

We believe the author would have done better to have omitted from the appendix his diatribe against a few of the critics of former editions. These are best passed unnoticed.

* * *

The Treatment of Fractures. With Notes Upon a Few Common Dislocations. By Chas. L. Scudder, M.D., Surgeon to the Massachusetts General Hospital. Fourth Edition, Thoroughly Revised, Enlarged, and Reset. Octavo volume of 534 pages, with nearly 700 original illustrations. Philadelphia, New York, London: W. B. Saunders & Co. 1903. Polished Buckram, $5.00 net: Sheep or Half Morocco, $6.00 net.

This book has reached its fourth edition in as many years, an evidence unapproachable of its merit. We have had occasion before to comment favorably upon this work, and it gives us pleasure to do so again here.

The features of this addition are the additions of many new illustrations, of which there are 668, some of which include X-ray plates of the epiphyses at various ages.

* * *

The International Medical Annual. New York. E. B. Treat & Co. 1904. Price, $3.00.

This book, now in its twenty-second year, is interesting, especially when compared with the American books of the same nature and scope, as the contributors to this volume are all foreigners, save, perhaps, one or two.

It is gratifying with what respect our foreign brothers look upon the efforts of American physicians and surgeons, shown by the frequency with which they quote from American publications.

The book maintains the usual excellence of its predecessors in thoroughness and conciseness.

* * *

The American Year-Book of Medicine and Surgery for 1904. A yearly digest of scientific progress and authoritative opinion in all branches of medicine and surgery, drawn from journals, monographs, and text-books of the leading American and foreign authors and investigators. Arranged, with critical editorial comments, by eminent American specialists, under the editorial charge of George M. Gould, A.M., M.D. In two volumes. Volume I., including General Medicine. Octavo, 673 pages, fully illustrated. Volume II., General Surgery. Octavo, 680 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Co. 1904. Per volume: Cloth, $3.00 net; Half Morocco, $3.75 net.

The editor, Dr. George M. Gould, has called to his assistance in preparing this work a corps of collaborators who are distinguished in their various specialties, too numerous to mention.

The work is issued again in two volumes, Medicine and Surgery, and both are well illustrated by full-page plates. It is an admirable resume of the progress of medicine and surgery in all its branches and it is a valuable addition to one's library.

* * *

Progressive Medicine. Edited by Hobart Armory Hare, M.D. Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; assisted by H. R. M. Landis, M.D., Assistant Physician to the Medical Dispensary of the Jefferson Medical College Hospital, etc. March 1, 1904. Lea Bros. & Co. Philadelphia and New York. 1904.

As previously announced, this quarterly publication is now issued in paper, materially influencing its cost. Its excellent contents are in no way changed. The contributors to this volume are Drs. Floyd M. Crandall, Charles P. Grayson, Robert B. Peeble and Robert L. Randolph.

The subjects considered in resume are Surgery of the Head, Neck and Thorax; Infectious Diseases, including Croupous Pneumonia, Rheumatism and Influenza; Diseases of Children; Laryngology, Otology and Rhinology. The usual number of illustrations are found in this volume.

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LOUISVILLE MONTHLY JOURNAL

OF MEDICINE AND SURGERY.

VOLUME 10. LOUISVILLE, MAY, 1904. NUMBER 12.

Original Communications.

UNITED FRACTURES AND THEIR TREATMENT.*

BY JAMES B. BULLITT, M.D.

LOUISVILLE, KY.

Before considering the reasons for the failure of union of fractured bones it is necessary to consider briefly what the process of repair is after an injury of this nature.

"Repair of fracture begins with the deposition at the seat of fracture of a germinal tissue rich in cells and blood vessels, termed the provisional callus. This tissue replaces the extravasated blood which takes no part in its formation. It is produced from the inner layer of the periosteum (the external callus), and the medulla of the bone (the internal callus). The intermediary callus is that part between the broken ends of the bone, and is derived chiefly from the periosteum, the medulla and the opened Haversian canals having little part in its formation. The amount of callus depends on the mobility of the fragments and on the condition of the blood supply, being greatest when there is much motion and a plentiful blood supply, and least when there is perfect fixation and a meager blood supply. The further steps of repair are essentially those of an ossifying periosteitis and osteomyelitis. By the deposition of lime salts the soft cellular tissue gradually becomes more firm, while osteoclastic action hollows out trabeculæ. By about the second week the two fragments are bound together by a medium of wide-meshed bone tissue; by the end of the third week the periosteal callus usually consists of fairly firm spongy bone. Meantime the medullary callus develops in the same way, sometimes occupying the whole of the medullary cavity. There now begins a retrogressive metamorphosis of the callus, the provisional callus being transformed into the permanent bone cicatrix by becoming more compact, so that later on the cicatrix may scarcely be visible. The closed medullary cavity may also become opened and completely re-established by this process of absorption and compaction. The amount of callus remaining permanently seems to be in proportion to the functional necessity of the union. Thus, if perfect reduction has been accomplished and the limb has been held in a mechanically correct axial line, a minimum of permanent callus remains, forming the bone cicatrix. On the other hand, if reduction is imperfect and the axial line faulty, a larger permanent callus will result. In this manner the structure of the bone at the point of fracture is regenerated as completely as possible and in accordance with the demands of the laws of statics."*

There are two conditions under which repair of fracture does not take place; one of these is local and mechanical, while the other is general and vital in its nature. The bone ends may be so far separated from one another by intervening soft structures as to invalidate nature's efforts in the way of callus formation, so that no matter how much callus may be produced

*Read before the Louisville Surgical Society, March 7, 1904.

*Quoted from article by James B. Bullitt in Cyclopedia of Medicine and Surgery.

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about the bone ends, these ends are so separated by intervening soft structures as to prevent the junction of the callus from the two bone ends and so prevent union from taking place. On the other hand, no matter how neatly apposed the bone ends may be there may be an utter failure of the formation of callus, this failure being due to general and vital conditions and resulting, of course, in failure of bone union. Exactly what all the conditions are which prevent or arrest callus formation before the state of ossification is reached, it is impossible to say; but it is known that when certain constitutional anomalies exist, as in syphilis, or scurvy, or during typhoid fever, or pregnancy, in diabetes mellitus, and in certain diseases of the peripheral nerves and central nervous system, there is very apt to be delayed or failing callus formation.

The wide diastasis of fragments, as in transverse fracture of the patella, frequently results in failure of bone union, but this phase of the question will hardly be considered under the title of this paper. Neither do we propose to deal with the failure of union resulting from insufficient nourishment of one of the fragments, which occurs sometimes in intra-capsular fracture of the neck of the humerus and femur.

In general it is manifest that if any specific causes of a general nature, such as have been mentioned above, exist, it is imperative to employ such therapeutic measures, medicinal, dietetic and hygienic, as are recognized as being of service in the correction of such conditions. Thyroid extract enjoys some reputation as an agent of value in delayed union. That it is of any value in actual non-union is very questionable. On the other hand, if local mechanical conditions preventing union are present, such as the interposition of soft structures, it is absolutely essential that these should be corrected by surgical procedure at as early a time as the presence of such conditions can be determined. Thus it will be necessary for a surgeon to cut down on a fresh fracture on first seeing it, for the purpose of correcting faulty conditions and preventing the probable occurrence of ununited fracture.

The larger number of cases of ununited fracture coming to the surgeon belong to the second division, the results of constitutional dyscrasias which prevent proper callus formation. These constitute the inveterate cases which are prone to defeat in many cases the surgeon's best directed efforts.

Before taking up the operative treatment of this class of ununited fractures it will perhaps be profitable to discuss briefly the local conditions about the limb which favor callus formation, or which tend to minimize such formation. While perfect fixation unquestionably tends to permit a callus to evolve into finished bone with the limb in the best possible axial position, the writer is thoroughly imbued with the idea that a too perfect fixation oftentimes tends to prevent the formation of the callus. Thus, given a limb with a fractured bone, the more the circulation of blood through this limb is interfered with the less tendency there will be to callus formation; and, per contra, the more the circulation through the limb can be stimulated the better will be the callus formation. In this fact lies the strength of the contention of the French school that fractures are best treated by mobilization and massage rather than by immobilization, perfect fixation. This fact also lends strength to the so-called ambulatory treatment of fractures, the motion to which the limb is exposed favoring always better circulatory conditions and hence better callus formation. So it happens that oftentimes the most successful fixation of the surgeon is rewarded by the poorest callus formaton. Especially does this apply perhaps to the circular application of fixation dressings whereby ischaemic conditions are so often produced.

When, despite the surgeon's best efforts, a fracture has failed to unite we come to the consideration of the manipulative or operative procedures which are best for the surgeon to undertake.

The time honored procedure has been to vigorously rub the bone ends together, in this way attempting to excite callus formation; and this simple procedure occasionally suffices, provided it be not undertaken at too late

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a time, but vigorous daily massage should always be combined with it, the limb being held in line by splints meantime. If the fracture be of the lower extremity splints should be arranged in such a way as to make the limb weight-bearing, or partially weight-bearing. The writer recalls a case of fracture about the middle third of the femur, in a boy about thirteen years of age, who was sent into the Hospital for the Ruptured and Crippled by Dr. L. Emmett Holt. The treatment was directed by Dr. Gibney, and was carried out by the writer. Short splints were applied from knee to hip and held in place by a bandage. A Taylor hip splint was then applied with extension, and the boy was permitted to be constantly on his feet during the day, the sole of the foot coming lightly in contact with the ground in walking. A good part of the weight was, of course, borne by the perineal band of the hip splint. After a few weeks' treatment union was complete and secure. Had a vigorous daily massage been added to the treatment outlined above, it is the writer's opinion that a quicker and better union would have been obtained.

If this procedure fails the next thing to be considered is the application from the outside of mechanical devices which penetrate the skin and are designed to hold the bone ends in apposition. The first of these, perhaps, were the hooks of Malgaigne designed for the treatment of fractured patella. Two hooks caught the upper edge of the upper fragment while the other two caught the lower edge of the lower fragment; then by a ratchet arrangement these two sets of hooks were made to approach one another, thereby obliterating the diastasis between the two fragments. This device was ingenious and doubtless would succeed in some cases, especially in these latter days of asepsis, when a better guarantee could be given that infection would probably not occur; but certainly infection along the hooks would be a danger to be considered. Further than this, union under these circumstances would frequently fail in the case of the patella, even if the bone ends could be brought together in this way, by reason of the stretched and torn aponeurotic ends dropping down between the fragments, mechanically interfering with union. The same objection would apply to any device which did not consider the opening of the soft parts, thereby enabling the operator to freshen the bone ends and bring them into apposition without the intervention of soft structures.

We now come to consider measures which have in view the division of overlying soft structures, dealing directly with the bone ends. The most generally employed operation is that of cutting away enough of the bone ends to insure contact of fresh cancellous tissue, the freshening being made preferably in such a way as to permit overlapping of the fragments. Externally applied dressings and spints are relied upon to hold the bone ends in apposition. Treves, in the edition of his work which is just out, recommends this simple method most highly, but lays stress upon the fact that the success of the operation depends more on the completeness of the arrangements for keeping the bones in position after the operation, than upon the operation itself.

Most surgeons who have had much experience with this form of operation will quite agree with Treves, and will further testify that such arrangements for maintaining position are extremely difficult to adequately provide. As a consequence it is not at all infrequent to have patients so operated upon submitted to two, three, four or five operations, or so long as the bone and the patient last. Treves condemns without qualification wiring of the fragments, and also the various forms of apparatus in which plates of metal are secured, outside the skin, to the bone ends by means of long screws. Of such a device we shall come to speak presently.

Treves' objection seems to be theoretical, as he does not appear to have tried it, but has condemned it on the ground that septic organisms may creep along the screws causing serious consequences, or even death.

Ligatures of various materials, silver wire, bone and metal ferrules, metal and bone pegs and nails, ivory, bone and metallic plugs for insertion into the medullary cavity, all have the objection that the fixation afforded is inse-

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cure and imperfect, and the agents are often disposed to cause an irritation necessitating removal. All of these devices, however, have this value in common, that they tend by their presence to promote callus formation.

Next we come to consider the buried metallic plates and screws of Agnew, which likewise have the disadvantage ordinarily that a secondary operation is required for their removal. That such removal is not always necessary seems to be attested by the following case, operated on by Dr. Cartledge and myself more than two years ago. The patient, together with a skiagraph showing the metal plate still in position, has been presented to you to-night.

A man, aet. 40, on December 23, 1901, in attempting to stop a team, slipped and fell, the wagon loaded with beer passing over his right leg causing fracture of femur about its middle portion. Plaster of Paris was applied and kept on for six weeks. Plaster was again applied for two weeks. Has not been on his feet since accident. Non-union, ends of fragments overlapping.

Operation on February 24, 1902. Preliminary to operation boric acid compresses were applied for four days alternating with green soap. Incision was made on lateral aspect of leg over site of fracture. The ends of bone were embedded in muscles, no callus formation; bone down to medullary canal in both fragments sawed off. A silver plate 4 x 7/8 x 1-16 was applied by means of six screws over periosteum. Incision closed with drain and Plaster of Paris, hip spica to toes, applied. Drainage removed in three days.

Discharged from infirmary April 3, 1902. Apparent though not firm union was determined at end of four weeks.

March 5, 1904. Patient has been actively using limb for burden bearing for eighteen months. Femur is somewhat bowed but limb is strong and painless. The plate by its presence has so far caused no irritation.

It is, of course, possible that irritation may yet be caused and the removal of the plate become necessary. These plates stimulate callus formation and at the same time hold the fragments firmly, allowing the best cementing action of the callus to be utilized. Had this plate and screws been used in an ununited fracture of the humerus which presented itself for operation several years ago I am convinced a different result would have been obtained. After two unsuccessful efforts by simple apposition and by suture with heavy chromicized catgut, the man's patience finally gave out, and he is doubtless dangling his useless arm now in a country grocery, with only his scar to show for his pains; unless, indeed, he has had the good fortune to fall into the hands of some surgeon who knew how to use this metal plate, or the clamp of Parkhill, which I am about to describe.

Parkhill's clamp was devised by him in 1897 and described in the Annals of Surgery in May, 1898. It is designed to do exactly what the plate and screws do, but, being applied on the surface of the limb, it is capable of being removed after bone union has taken place. *The instrument consists essentially of four shafts, each with a thread cut in the lower end and also one near the upper end. The extreme upper end is made square so that the shaft may be governed by a clock key. Two sets of curved wing plates are attached to these shafts, the lower pair corresponding to the outer ones and the shorter pair to the inner. Each wing plate is fixed to its shaft by two nuts running upon the upper thread, one above the plate, the other below for accuracy of adjustment. When in position one wing plate overlies the other in each half of the instrument, and when clamped the pair lie side by side. They are fastened together by a steel clamp with a screw in each end. These screws and shafts are controlled by the same clock key, and the nuts by a small wrench. The clamp is applied to the bone in the following manner: After exposing the bone ends and paring away enough bone to insure contact of fresh cancellous surfaces, two of the metal shafts are screwed into the proximal fragment, about two or more inches apart, and two into the distal fragment, the same distance apart, and far enough away from the bone ends to insure a strong and firm hold in the bone substance. All four shafts are applied in the axial line of the limb, and care must be ex-

* Annals of Surgery, Vol. XXVII, p. 553, 1898.

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ercised to apply them at the same angle. The wings are now applied to the shafts, the bone ends are manually apposed and while held in this position the clamp is tightened down on the wings, rendering them immovable. The soft structures are closed by suture around the shafts. A dressing is now applied over the skin and beneath the projecting portion of the clamp. Finally the clamp is enveloped in cotton and a long splint applied to the limb.

Parkhill makes the following claims:

1. Union occurs in every case, as against 56 per cent. of successes by all other mechanical means, according to Bruns and Gurlt.

2. The apparatus is easily and accurately adjusted.

3. It prevents both longitudinal and lateral motion between fragments.

4. The presence of the shaft in the bone stimulates the production of osseous tissue.

5. Nothing is left in the bone which might reduce its vitality or lead to pain and infection.

6. No secondary operation is necessary; generally there is no infection; sometimes slight infection, but not serious in any case.

Parkhill reported fourteen cases in 1898, operations by four operators; in all good union was obtained.

A. L. Bennett* in 1900 reported four teen cases operated with Parkhill's clamp, with nine perfect results. These fourteen operations were done in "Darkest Africa" on native Africans, where conditions were certainly not of the best for aseptic healing of wounds.

In conclusion the writer would say that in intractable ununited fractures, especially those which have been operated on one or more times, unsuccessfully, by other methods, the buried plate and screws has many advantages and offers a very substantial prospect of procuring union. While the plate may be retained indefinitely in some cases, in most cases a secondary operation for its removal will be necessary, which is a distinct objection to it.

On the other hand, the Parkhill clamp fulfills exactly the same indications and has the advantage that it is removable without a secondary operation. The only objection which can be urged against it is a possibility of infection occurring along the shafts which are buried in the bone; but the evidence of Parkhill and others is to the effect that this is an infrequent complication and not necessarily a serious one when it does occur.

Both of these methods are applicable also to recent fractures in which it is found impossible to hold the bone ends in proper position by other means.

*Annals of Surgery, Vol. XXXI, p. 827, 1900.

DISCUSSION.

DR. AP M. VANCE: I have never had an united fracture following my own work and I have operated on but two cases. One was a congenital fracture of both bones of the leg, upon which I operated twice. At that time silver wire was used and results were not attained because the fracture was so near the ankle-joint that there was no nutrition in the lower fragments. The child was able to walk afterwards by aid of a splint. The other case was an united fracture of the femur, in which we used half a dozen strands of silk-worm gut. This was Dr. Roberts' case.

I have treated a great many cases of united fracture following other surgeons. In those of the femur, with the exception of the one spoken of, I have succeeded in getting union. Fractures of the humerus are hardest to get to unite and they usually require some mechanical appliance to the bone. Ununited fractures of the leg I get to unite by putting on plaster of Paris and making them walk. I have had a great many retarded fractures in which I got union by tonics and longer rest.

I think Dr. Bullitt's results in this case are very unusual and fortunate. I doubt if the plate ever gives any trouble.

DR. AUGUST SCHACHNER: With reference to the cause, there has been a definite rule promulgated by Dennis that there is a direct relation between the direction of the fracture and that of the blood-vessels. He says that if you take the elbow as the central joint of the upper extremity and the knee of the lower, the blood supply tends toward the elbow and away from the

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knee. Non-union occurs generally in the end opposite the direction of the blood supply, most likely at the upper end of the humerus and lower end of the forearm, or at the lower end of the femur and upper end of the tibia. This theory seems to be pretty well supported by cases. It is a question of nutrition and this is along that line.

I think it is unusual to bury a plate without having subsequent trouble, and I think this man will yet have disturbances. I believe the Parkhill screws are less open to objection than the plate. Some years ago, in looking through the English hospitals, I was surprised at the specimens of vicious union and the strongest kind of union from overlapping.

Dr. W. O. Roberts: The patient referred to by Dr. Vance was a young man with a fracture of the thigh as the result of a railroad accident. He was treated by plaster-of-Paris and had non-union, though there was little displacement of the fragments. We cut down and fixed the fragments with silkworm gut with excellent results, but the gut had to be removed on account of irritation. That was the only fracture of the lower extremity I ever operated on.

I have seen cases of delayed union which have gotten well by the patient's walking. I saw one the other day. I have had one case of fracture of the humerus which I exhibited to this Society, a compound fracture treated at a distance from here. When I saw it there was a thick fibrous union with displacement of the fragments. This was operated on like the other, except that chromocized catgut was used instead and the arm put up in a fixed dressing, but no union resulted.

As an illustration of the want of formation of callous, I had a beautiful case of a man with both thighs broken and injury to the spinal cord, resulting in complete paralysis of the lower extremity. He lived eight weeks, and when he died I made a post-mortem and there had been no attempt at callous formation at all.

I am surprised that the plate has given this man no trouble, for they generally have to be removed at a later date. It may not be so in this case.

Dr. W. R. Blue: Dr. Bullitt's case recalls an operation I saw Sir J. Lister do in 1891 for united fracture of the femur, in which he brought the bones together with ivory pegs. He passed the pegs around and as I was "roosting high" I pocketed one of the pegs, but he called for it and I had to give it up.

Dr. Bullitt (closing): The ivory pegs have to come out of the legs as well as out of the pockets. I think it is true that this plate may have to come out after all. It was put in with that expectation, but so long as it does not give him any trouble we will not trouble it. The tissues were in worse condition then, however, than they are now, for there was no callous formation then.

As to Dr. Schachner's point about Dennis' rule, I have called attention in the paper to the extreme importance of the blood supply. This is where the surgeon often fails. The chapter on fractures is the hardest chapter in surgery; less intelligence is used in treatment and more poor work done than in any other department. We often do the very things which prevent the bones from uniting. Instead of encouraging the blood supply in the early treatment, we bring about conditions which inhibit callus formation by cutting off the blood supply. It is a very common practice to put up a fracture in plaster-of-Paris for a number of weeks until the process of healing is expected to be complete. In this way, in many cases, we have prevented the determination of lymph to the parts and prevented callus formation. The time when fixation is important is in the late stages after the callous is thrown out. In the early stages fixation is not important, but mobilization and massage are the things. In the late stages fixation is very important.

I realize, as Dr. Vance has elaborated, that many cases can be cured without any kind of operation and the devices I have shown here are for those cases where the simple procedure has proven ineffective. This patient was a very bad subject and there had been no callous formation, and so the operation was done earlier than ordinary. There are conditions where it is proper to operate, either with plate or Parkhill's clamp. I confess that I prefer the latter. It comes to us on the recom-

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mendation of one of the best surgeons the United States has ever known. It has many advantages over the plate and will be my choice in the future.

In fractures of exposed bones, such as the tibia, the plate is more easily applied than to such bones as the femur, but the same is true of Parkhill's clamp.

I am sure that the treatment of ununited fractures should be undertaken before non-union occurs. Most of these fractures, if treated properly, would not result in non-union.

A CASE OR TWO IN ABDOMINAL SURGERY.*

BY AP MORGAN VANCE, M.D.

LOUISVILLE, KY.

Case I. Mrs. M, aet. 34, married, mother of nine children. I was called to see her March 3, 1902. She was by all odds the most miserable woman I ever attended. I found her in bed in filthy condition, the uterus out in the world ulcerative and foul, quite as large as two fists. She was moved to the ward at St. Joseph's Infirmary, and cleaned up. After reducing the uterus, a tampon of glycerine was inserted twice daily, after an extensive douching with saline solution. By March 11th the local condition was improved sufficiently to proceed with an operation, or rather several operations aiming at relief. A thorough curettement was first done. Lnilateral trachelorrhaphy, and then an anterior and posterior colporrhaphy, the anterior vaginal work being done with the uterus out in the world, No. 1 chromic cat-gut being employed in all suturing. In these first procedures gloves were used, the vagina which would easily admit two fists, was reduced to caliber just small enough to allow the insertion of the last line of sutures. The abdomen was then opened in the median line by a four inch incision and the uterus drawn up half way to the umbilicus and firmly stitched to the wall with No. 1 chromic catgut. The tubes and ovaries being left undisturbed. The abdominal incision was closed with three tiers of catgut, two strong silkworm gut sutures being passed well into the uterine tissue and tied outside, about the middle of the incision. One hour and forty minutes was consumed in all this work. The woman made an uninterrupted recovery, and when she left the infirmary at the end of four weeks she looked like a different individual. She has remained perfectly well since, all the parts remaining as I left them, in spite of the hard work she does. I was sorry, after finishing this case, that I had not tied off the tubes, as I am convinced that the difficulties following pregnancy, in such cases, would justify this procedure. Fortunately this has not occurred in this woman.

Case II. Mrs. S., aet. 26, married, one child. Came under my observation just eighteen months before the operation to be reported, which was done May 16, 1903. This history was then obtained, six months before I first saw her, or two years before the operation I did, she had an operation done by Dr. Cartledge, of ventral suspension, at Norton Infirmary. Five days afterward acute appendicitis developed, and the abdomen was reopened through same incision and the appendix removed. She made a good recovery and two months after returning home aborted at six weeks. She had little trouble following, and three months later aborted a second time at six weeks. A month after this I was called, she having been in bed since last mishap, suffering with abnominal pains; was emaciated and generally run down. Examination revealed both sides of pelvis filled with what I took to be inflammatory masses, the uterus, however, was comparatively movable. I advised operation, but heard nothing of the case until eighteen months later, when I was called again, examination revealed the same condition of things in the pelvis, with a history of another miscarriage. This time she consented to an operation and was removed to the St. Joseph Infirmary, and on above date the abdomen was opened. Much to my surprise I found the tubes and ovaries perfectly healthy, the uterus in very good position, suspended by a narrow band about two inches long. The great omentum, was hanging far down in the

* Read before the Louisville Medico-Chirurgical Society, March 4, 1904.

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pelvis, being divided by the suspension band, in such a way that half of it lay on either side of the band, the omentum was much thickened and seemed to have proliferated, like we sometime see in old hernia. I cut the band away, straightened out the omentum, spread it out well, and closed the abdomen. All the troublesome symptoms departed, which were constipation, excessive pain whenever the intestines were filled with flatus, and inability to get about at all, on account of pain. She has been well since, returning home at end of two weeks.

Case III. On January 30, 1903, was called by Dr. Clark to see Mrs. McC., aet. 22, who for two days had been suffering with abdominal pains, which were thought to be due to eating cheese three days berore, and as purgation did not relieve temperature, and localization of the pain about appendicilar region occurred, the Doctor called for consultation. I found abdomen hard all over, pain on pressure low down in right iliac region. Anxious countenance, pulse 130, temperature 103. Pregnancy at two months complicating the case as well as diagnosis. I advised immediate operation, which was done, the incision being made in median line. Dr. Clark thinking it appendicitis, I being uncertain. When the peritoneum was nicked pus came out in a little stream, the cavity being filled with it from top to bottom, the intestines were red and injected, the appendix was found the source of the trouble and removed. It was free, but perforated at its tip. I washed the whole cavity with hot saline solution until it came away clear, then closed the incision with catgut in three tiers, but before closing the peritoneum, the cavity was tightly filled with hot saline solution, which was left in it. Much to my surprise she went on to a rapid recovery, returning home at the end of two weeks. The pregnancy was uninterrupted, the baby coming at term. I have had several similar cases of peritonitis, treated the same way, which recovered. Others where the process has been of longer duration have died.

Case IV. Mrs. C., aet. 19, an old patient of mine at the Children's Free Hospital, where she was treated for double hip disease. Both thighs had been subjected to osteotomy for the correction of angular deformity, one being in abduction, the other in adduction. In the course of years flexion had returned, on account of the sitting posture being almost continually maintained. Soon after marrying pregnancy occurred, and when about seven months advanced she consulted me, as she had been told by her physician in the country that the baby could not be born naturally. After an examination I agreed in this opinion and advised a Cæsarian section, which was done at St. Joseph's Infirmary May 27, 1903, Drs. Frank, Frazier and Spears assisting, Dr. James Vance administering the chloroform. With the assistance of Dr. Frank the measurements of the pelvis were taken.

EXTERNAL MEASUREMENTS.

	(PEARL DENNY.)	NORMAL.
Intra-Spinous....=	8¾ in. or 22.5 c.	26 c. or 10 2-5 in.
Intra-Cristal....=	9 in. or 22.5 c.	29 c. or 11 3-5 in.
Bis Trochanteric=11 2-5 in. or 28.5 c.		31 c. or 12 2-5 in.
Antero Posterior=	6¾ in. or 17 c.	20.25c.or 8 1-10 in.
Oblique.....=	8½ in. or 21.25 c.	

INTERNAL MEASUREMENT.

		NORMAL.
Antero Post or true conjugate....=	8 in. or 7½ c.	11 c. or 4⅓ in.

After the regular surgical preparation the abdomen was opened by an incision eight inches long, extending well above the umbilicus, and the ordinary procedure carried out as to the uterus, a free and bold cut was made, which missed the placenta, the child grasped and delivered, the head being tightly wedged into the pelvis, requiring quite a good deal of force to dislodge it. The placenta was at once torn loose and delivered, the cord having been clamped and cut. Hemorrhage was very free for a moment, but was controlled by Dr. Frank's hands on the neck of uterus and the contractions which came on immediately. The uterine wound was closed with a deep and superficial line of interrupted silk sutures, a continuous suture of fine catgut over them. The abdominal wound was closed with three tiers of catgut. The uterus was emptied in three minutes from first cut with knife, and the binder on and patient on the way to bed in 27 minutes. An uninterrupted recovery in every way followed, and the patient returned home in three weeks. The child was given to an orphan asylum, but died in

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twelve hours. I have since learned that this woman probably deceived me as to dates, and instead of being, as I calculated, eight and a half months, she was seven and a half months pregnant, though the child had every appearance of being near term. The patient was made sterile by ligature of and removal of a section of each tube.

Case V. Mrs. H., aet. 46, in consultation with Dr. W. F. Boggess July 26, 1903, I found this woman in great distress. Pulse 130, temperature 103. She had a large and old umbilical hernia strangulated, was continually vomiting. The history obtained indicated that she had one week before had an attack of gall stone colic, followed by jaundice, which was still present. The hernia was so much in evidence, however, that relief of this condition was the prime object of immediately removing her to St. Joseph's Infirmary for operation. The hernial coverings were quite black by the time the operating table was reached, on removing which an immense mass of depressed and sick omentum was removed from the very irregular sac, a coil of intestine in fair condition being released. As soon as the cavity was opened by relief of the hernial constriction large quantities of bile gushed out. After repairing the hernial opening another free incision was made over the gall bladder and the leak from which the bile came sought for. A small contracted gall bladder was found, which was intact. Just above the neck of the gall bladder was an opening into what I suppose was the cystic duct. The cavity was cleaned of a great deal of bile, but no stone could be discovered. By this time the patient was beginning to show shock and exhaustion, and a large tube surrounded by gauze was introduced down to the neck of gall bladder, and the wound closed. The patient, to my great surprise, made a complete recovery, and is well to-day. My conception of the case is this; there was a distended gall bladder with a stone or stones in it, one of the stones was lodged in the cystic duct for more or less time, causing ulceration, finally passed to common duct, causing the jaundice. The hernia becoming strangulated, during the resulting vomiting the cystic duct rupture turning bile loose into the general cavity.

Case VI. Mrs.B., aet., 46, seen in consultation with Dr. Brandeis. There was a history of fibroid tumor of the uterus for two years. While in the country, and after a long walk, great pain occurred referred to the pelvis. Dr. Brandeis saw her and thought from the symptoms that the tumor was undergoing inflammatory changes and advised an immediate operation. On August 18th, the second day after the doctor saw her, she was removed to St. Joseph's Infirmary, pulse 150, temperature 103½. At this time it was easy to confirm the doctor's diagnosis as the uterine neck even was discolored, and there were signs of beginning peritonitis. When the abdomen was opened, after the necessary vaginal work to free the neck and clamp the uterine arteries was done, a large interstitial fibroid was revealed decidedly blue in color like the neck of uterus. In addition a left side ovarian cyst with twisted pedicle showed up in bad condition, sick and adherent from beginning peritonitis. A complete hysterectomy was done, and after a moderately prolonged convalescence the woman recovered perfectly.

DISCUSSION.

Dr. H. Horace Grant: Dr. Vance's report of his management of these cases shows that his methods are those to be employed. The case of most interest to me was that of general peritonitis, with the cavity filled with pus. We must have some sort of plan as to the management of these cases and the plan which has been attended with success is the one we are anxious to discover. It seems to me this method is the riskiest of all. Conditions of this kind have been a bugbear to the profession ever since we have had any knowledge of antiseptic surgery. It has been my custom to provide free drainage, not only through the abdominal incision, but also through the flanks, and I have had reason to believe this plan the most successful. In three cases of septic peritonitis operated in this way, satisfactory results were obtained. Where pus is present in the peri-

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tonel cavity, the original focus should be found if possible, but as these cases bear surgery badly search cannot often be made; hence reaccumulation is to be expected. Although it is true only a limited amount of drainage can occur after the insertion of a drain, the fact that there is some focus leads me to believe it is best to plan the escape of subsequent accumulations, I have never pursued the plan of closing the cavity in this condition, but it appears to me to be the least safe of the two methods. I have some hesitation in expressing this criticism in the absence of trial, but such is my firm conviction.

The other operations were classical in every particular, and it is a remarkable array of successful cases.

Dr. A. M. Cartledge: In regard to the treatment of the cases of general peritonitis, especially the appendix cases, I am reminded of the experience of Clark, who was bitterly assailed by nearly every one when he read his second paper at the St. Paul meeting. They seemed to think that his experiments did not bear out his theory. He made the claim that leaving the abdomen full of fluid and allowing to gravitate was a good thing, but he had only a few cases to back it up. You may have noticed that recently he has been making experiments with animals along this line. With the use of saline the results were wonderful, and to me convincing. I think that perhaps Dr. Grant and Dr. Vance are not looking at the same thing. I found at the Charleston meeting of the Southern Surgical Society that men were fighting over general peritonitis and not referring to the same condition.

After opening the belly and out comes pus, of which you find the appendix to be the seat, with a hole in it; no adhesions. It seems logical to suppose that stopping the hole and watching the case will do about as much good as anything, for you cannot drain the entire peritoneum. The trauma of the gauze would do about as much harm as good. I propose to treat all such cases without drainage.

But if you find the appendix glued down and surrounded by walled-in pus, it would be hazardous not to put in a little drain at that point. I have saved cases of beginning peritonitis by stuffing them full of gauze. If there is even a local concentration of the poison, it is better to put in a drain under any circumstances. I was ready to endorse every word Clark said at St. Paul. because I had similar experiences in bad cases. I believe the gravity drain is a great thing.

Dr. Louis Frank: I am in perfect accord with the opinion expressed that normal solution in advanced peritonitis is the thing. I do not believe in stuffing the belly with gauze in any condition and think many are killed by it. My experience is that more cases get well now than formerly, and that it is not only due to difference in technique but to lack of indiscriminate introduction of gauze drains. When drainage is needed, I think we get just as good results from a small, rubber-covered wick. If any of these cases of advanced suppurative peritonitis are saved, the only way to accomplish it is by filling the belly with saline. We get rid of all we can and the remainder is taken up by leucocytosis through the diaphragmatic lymphatic.

Dr. Ben Carlos Frazier: In the peritonitis case, which I saw, the woman seemed to be in a desperate condition, but she went along to term without abortion, which was remarkable. She rallied quickly and made a good recovery.

Dr. Vance (closing): This is the first case of general peritonitis that I have closed absolutely. I had been impressed with the fact that when we did leave the belly full of salt solution, the ordinary drain got out very little and the abdomen was practically closed. Pregnancy was what decided me not to drain this woman, for I felt that a drain would produce an abortion and I would lose her from that.

I was surprised, as was Dr. Cartledge, with Clark's report of the saline. My work has been so much more successful since the introduction of normal salt solution that I could not help being impressed with it. You can almost see death stop in these appendix cases. In the last thirty-six cases, there have been only two deaths and they were hopeless to start with. I fill them all with salt solution, unless the process

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is walled off. I have had three cases where simple cigarette drain was put down and they recovered with slight soiling of the dressing. I believe it is the salt water left in that does the business, especially if there is constipation. If croton oil is given on the table, salt solution in the belly will produce more effect than any other method of using salt.

I agree perfectly with Dr. Cartledge. If I had let this woman go another day I could not have saved her by any method. I remember a woman with pus tubes where the intestines looked like macaroni in soup. She had a gallon of pea-soup pus. I took the tubes away, washed her out as it was an abortion case, and she recovered. I drained her with a cigarette drain on either side of the pelvis.

I had a boy not long ago with appendicitis, with a gangrenous appendix free in the cavity, without any adhesions at all, in a more aggravated condition than the pregnant woman. I filled him up with saline and put in a little drain, which did not aspirate any, and he went home in seven days well.

SOME ADVICE TO GIVE, AND SOME NOT TO GIVE, THE TUBERCULOUS.

BY ARCH DIXON, JR., M.D.,
EL PASO, TEXAS.

For a number of years the subject of pulmonary tuberculosis has received more attention than any other medical topic. Medical journals have been full of articles on its cause, prevention and cure; the medical societies have discussed it at length; societies have been formed to stamp it out; and even the lay press has disseminated valuable knowledge on the subject. But, in spite of this—if testimony of patients is to be believed, and there is so much of it, and of such uniformity that it can not be doubted—there is, in the profession to-day, a surprisingly large number of men who do not know the first principles of the modern treatment of the disease. Patients are still sent West without the slightest regard being paid to their condition, and the elevation they are being sent to, with their pockets stuffed with prescriptions for stomach-destroying cough mixtures, and with the same old instructions to rough it, take as much exercise as possible, get on a ranch and hunt and ride, stay away from doctors, drink whisky, etc. Not only that, but hopelessly ill third-stage cases are still being sent West to die, many of them with hardly sufficient means to procure the bare necessities of life, much less the luxuries of which they stand so much in need. And it is against these practices I want to protest.

No tuberculous subject should be advised to leave home in search of climate unless he, or she, is financially able to be idle at least four months. Cases handicapped by having to earn a livelihood from the start have an extremely up-hill fight to make, and rarely do well. The crucial time for these unfortunates is during the first few months after the diagnosis is made, and during that time they should devote their entire time to the effort to regain their health.

It is a mere truism to say that the chance of a tuberculous case regaining his health is in direct proportion to the earliness of the diagnosis and the promptness of the institution of proper treatment. It should, therefore, be the rule to advise these cases to change climate at the earliest possible moment, when the chances of recovery are so much greater than when the disease has obtained a firm foothold. Tuberculosis is called by many names, but no other disease is ever called tuberculosis; at least not in this country, and in making a diagnosis, the safe thing is to look on suspicious cases as tubercular until proven otherwise.

It is a mistake to tell a tuberculous person that his lungs are weak, or that if he does not change climate he will probably develop the disease. It is much better to frankly tell him that he has the disease, for otherwise it will be impossible to induce him to carry out the necessary treatment. Telling a patient he has tuberculosis is no longer condemning him to death, as the disease is remarkably curable, if discovered early, and proper treatment instituted, and saving a patient's feelings at the expense of losing the best

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opportunity of curing him is radically wrong.

Tuberculous cases who are advised to come West should not be told that they will have to remain a few months or a year, and they can then return home in safety. It is much better to tell them in the beginning that in all probability they will have to go for good and all, as there is no safety for a tuberculous case in the climate in which the disease was developed. And once they know they must live West, they are much better contented than when they are living in constant expectation of returning home. A few cases return East after having recovered in the West, and the recovery remains permanent, but the number is extremely small. Any phthisio-therapeutist in the Southwest will bear me out in the statement that tuberculous cases by the score recover, at least, clinically, in this section only to return East and re-develop the disease—a proof positive of the great advantages of a suitable climate in the treatment of this most fatal but one of all diseases.

Tuberculous cases should not be advised to live in a tent unless they are also instructed to always leave one end of the tent open for ventilation. Tent life, as practiced by the average health-seeker, is a boomerang. Little or no air goes through good canvas, yet many tuberculous tent dwellers keep their tents tightly closed, spending a good part of the day, as well as the night, in them, fondly deluded with the idea that they are breathing nothing but fresh air. Some of these poor unfortunates, not content with the amount of harm they do themselves, living in a tight tent, must needs hasten their destruction by the use of one of those death-dealing devices—an oil stove. Such a combination—an oil stove and a tight tent—will kill a tuberculous subject with greater promptness and dispatch than any other I know of. A good sized room, with at least two windows, and the windows on hinges so they can be opened like a door, is much preferable to a tent, unless one entire end is left open. But porch life, which can readily be carried out the year round in a suitable climate (I speak from personal experience, having slept on my porch during the coldest weather we have in this section), is the ideal life for the tuberculous subject.

It is a great mistake, and one that is frequently made, to advise a tuberculous case to go to a climate with a high relative humidity. A great many men seem to think that a mild climate is necessarily a suitable one for these cases, but such is not the fact. Tuberculous cases recover in all climates, but the recoveries in humid sections are in spite of the climate and not on account of it. Dryness is the greatest essential in a climate suitable for the treatment of phthisis, yet hundreds of cases are yearly advised to go to Florida and Southern California, both of which places (except back from the coast in California, where few go) have a relative humidity equal to that of most any place in the middle States.

It is a well-known fact that the more humid the climate the quicker a tuberculous lung breaks down, while, on the other hand, the drier the climate the slower the process, other things being equal. Dry air lessens the expectoration, improves the bronchitis, and, by so doing, diminishes the constant drain on the system, husbands the strength, and promotes sound sleep so necessary to these cases. A dry climate is necessarily one with a large per cent. of sunshine, which is the greatest of all tonics. In such a climate the extremes of heat and cold are not felt to anything like the extent they are in a moist climate, which is a great advantage in treating phthisis.

Tuberculous cases should not be advised to go to high altitudes unless they are not farther advanced than the infiltrative stage, have good hearts and fair amount of strength, and are without high temperature, or nervous manifestations. Farther advanced cases than the infiltrative stage should go to medium elevations, and still farther advanced to still lower levels.

The great majority do better in a medium high altitude. Altitude is one of the greatest aids in treating phthisis; the rarefied air increases pulmo-

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nary expansion, and by so doing opens up blocked air cells, and promotes drainage. There is still some controversy as to the effect of altitude on the blood, but the evidence is in favor of there being an increase in the number of red cells, and the per cent. of hemoglobin. But as great an aid as altitude is, it must be used with discrimination, or otherwise great harm is often done.

A small weak heart is the rule in tuberculosis, and if there is added to this much lung involvement or neurasthenia, a most common accompaniment of phthisis, the chances are that the case will not do well in a high altitude. Not nearly enough attention is given to heart strain, which is so readily produced in the tuberculous in high altitudes, especially in those who have recently come from sea level, and who attempt feats of endurance.

No worse advice can be given a tuberculous patient than to tell him to stay away from doctors, that medicine will do him no good. Medicine alone will not cure these cases, as every one knows, but it certainly has its place in the armamentarium of the phthisiotherapeutist and it is foolish to decry it.

No class of cases stands in greater need of constant medical supervision than the tuberculous, and the man does not live who can treat them intelligently from a distance. All doctors in health resorts are not sharks, and a few, at least, are competent. Instead of advising these cases to stay away from doctors, they should be instructed at once to seek medical advice upon their arrival in a health resort, and to strictly follow it. If that were done in every case, the per cent. of unintentional suicides would be greatly lessened, and the per cent. of recoveries proportionally increased, among the unfortunates who change climate in the search of health.

Take advantage of the Special train service to the Atlantic City Meeting of the American Medical Association. One fare for round trip. See advertising pages.

PNEUMONIA.*

BY JACOB GLAHN, M.D.,

OWENSBORO, KY.

Pneumonia is an acute inflammation involving the alveoli of the lungs, is designated by the German writers "croupous pneumonia," and by the French writers "fibrinous pneumonia."

Catarrhal pneumonia differs from the fibrinous or croupous form in the *seat* and *character* of the inflammation.

It (the catarrhal form) attacks the capillary tubes immediately next the alveoli, and is a catarrhal instead of a croupous inflammation. The so-called lobular pneumonia is nothing more than catarrhal pneumonia; the changes in the lobules being secondary to the catarrhal process in the ultimate bronchi. Lobar pneumonia (not lobular)—a very close resemblance in pronunciation, is a fibrinous or coupous pneumonia, occupying and confined to a lobe. Pneumonia is also known in common language as lung fever, winter fever, etc.

Croupous pneumonia shall have our attention for the remainder of this manuscript.

Causes: There is a growing belief that pneumonia is a constitutional disease, like typhoid fever and the like. It differs from other inflammations in that it is *self-limited,* and *terminates* by *crisis.* It is a very common disease; it occurs in all degrees of latitude, under every variety of climate, and at all ages. It is common in infants at the breast, but declines somewhat after the second year—until after the second dentition; and is frequently encountered and is very fatal in the old.

The masculine sex is most frequently attacked, because men are more exposed than women to those external conditions which tend to produce it.

Indoor life, a vitiated atmosphere, excesses, especially alcoholic, and bad hygienic influences of every kind which induce debility, favor attacks of pneumonia.

Certain seasons appear to invite the disease—those parts of the year characterized by humidity and by variabil-

*Read before the Ohio Valley Medical Association.

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ity of temperature. In the British Islands winter is the season of greatest prevalence; on the continent, spring; in this country, winter and spring, the former especially, hence the name "winter fever."

Occasionally pneumonia occurs in so many persons in a particular district that it may seem epidemic, and there are, *probably, subtile* atmospherical influences at work to produce the disease, which elude our means of observation. Here let me add that the germ theory comes into play, and "pneumo-coccus" is the name applied to this bacillus.

How far this be true, and what offices this particular germ has to perform, I don't know, and I will take it for granted, like most practicing physicians, that the bacteriologists ought to know what they are writing and talking about.

It is common belief that pneumonia is caused by exposure to cold, especially to draughts when the body is warm and perspiring. That catarrhal pneumonia is induced that way no one will dispute, but it is *more than doubtful* that croupous pneumonia is thus caused, unless there exist a predisposition to it, either of a vulnerable constitution or an inherited tendency to pulmonary disease. Bartholow believes a phthisical tendency to be the chief factor, or that peculiarity in the structure of the pulmonary tissue associated with consumption.

There are diathetic states concerned in the production of pneumonia, as gout, rheumatism, diabetes, the eruptive fevers, and, lastly, chronic alcoholism.

Pathological Anatomy. I will not dwell very long on this caption, but slightly touch upon the state of the affected lung in pneumonia.

There are three stages, according to Jaccond, in croupous pneumonia.

First stage, hyperemia or engorgement.

Second stage, exudation or red hepatization.

Third stage, sub-divided into *two parts either, first, resolution, degeneration* and extrusion of the *exudation,* or *second, purulent transformation* or gray hepatization.

Gentlemen, it is not necessary for me to go much further with this section, as the different stages are self-explanatory, that gray hepatization or purulent transformation is a bad state of affairs in the affected lung, always a ready field for new trouble, you all know, and what it eventually leads to, you all are aware of.

Now I will cite statistics by Jurgensen as to what part of the lung is more susceptible to pneumonic inflammation. The right lung, according to Jurgensen's observation, was affected in 53.7 per cent.; the left lung 38.23-100 per cent.; both lungs in 8.7 per cent.

The inferior lobe of the right lung in the point of election, being the seat of inflammation in three-fourths of cases. So much on pathological anatomy.

Symptoms: There are two modes of onset. In the less frequent there has been a day or two of bronchial catarrh and general malaise, when some chilliness is experienced, pain is felt in the side, and the disease proceeds in its usual way.

In the other and more frequent mode, a decided rigor is the initial symptom, a rigor more severe than in any disease except malarial fever and pyemia. Elevation of temperature occurs at once, and in the evening of the first day has reached about 104 degrees Fahrenheit.

In infants instead of a chill there may be a violent general convulsion or several of them.

The duration of the cold stage is from a quarter of an hour to three or four hours, and during it the temperature in the axilla shows some slight elevation, and in a few hours not only is the external temperature high, but the subjective sense of heat is great. The face is flushed, the eyes injected, there are intense headache, severe pains in the back, and muscular soreness in the members. The pulse is large in volume and strong in tension. There is usually a whitish-coated tongue, the appetite is wanting, and there is nausea, or there are attacks of vomiting on the first day. By the end of the first day, or the beginning of the second, there are rational symptoms which indicate the chest as the seat of the mischief. Pain in

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the side is experienced, and difficulty of breathing and cough now come on. If the pleura is also involved, the pain is more prompt and more acute. Accompanying the pain or coming soon after it, is dyspnea; the respiratory acts are more frequent and shallow, reaching as high as thirty or forty per minute; the shallowness being due to the pain caused by full breathing, and by the narrowing of the respiratory field.

Facies pneumonica, or the well-known expression of the face in pneumonia is apparent to all medical practitioners. The cough, which appears on the first or second day, is very characteristic; it is husky, suppressed and painful. At first there is brought up a little frothy mucus, but on the third day there appear the sputa—characteristic of the disease—thick, viscid material like that which is poured out and coagulates in the alveoli and bronchioles of the lung. The sputum also contains blood-corpuscles intimately incorporated with the viscid albuminous matter, but in varying proportion of coloring, from light brick-red to a brownish black.

The maximum temperature (axillary) may reach 104 degrees Fahrenheit in the evening of the first day, and for several days it continues at about 103 degrees, 104 degrees, or even 105 degrees; there being a slight morning remission and evening exacerbation. The fever pursues this course with little variation—in favorable cases—until the period of crisis, when, just before the defervescence, a rise may take place. The rise in temperature in anticipation of the crisis is usual, but by no means invariable.

The pulse during the stage of hyperemia is about 100, full, hard and strong, but as consolidation takes place a change occurs in the pulse; it becomes less full or even small, soft and weak. The skin, during the time of greatest fever is mordicant, or burning hot, and is dry or covered with a warm perspiration. If the skin is relaxed—dusky, cool and covered with a cold sweat—the condition is unfavorable.

Now I could go on and describe the symptoms observed on palpation and percussion and auscultation and speak of crepitant rale and crepitatio redux, of the change in the voice, and of the reappearance of the chlorides in the urine, and of the salty taste in the mouth, and how, either the lungs clear off, soon after crisis, or in some diathetic patients an incomplete recovery takes place, etc., but you gentlemen are all familiar with those symptoms, and for fear that this paper might take up too much time, I will pass on to

Complications: Pleurisy is a frequent complication, the two diseases occuring together in from ten to twenty per cent.

Capillary bronchitis is a very dangerous complication of croupous pneumonia.

Emphysema is an occasional complication.

Pericarditis is more frequently a complication of pleuritis, but it may also occur in the course of pneumonia.

Granular degeneration of the heart-muscle is a serious complication and occurs when temperature is persistently high.

The existence of a typhoid pneumonia is pretty generally admitted, but on questionable evidence. Pneumonia is an occasional complication of typhoid fever, but it is not a typhoid-pneumonia. This term is applied to a form of pneumonia occurring in the weak, debilitated, and has, therefore, a specially adynamic character. There is *not* the fever process which we designate *typhoid;* there exists a pneumonia to which a specially adynamic character has been imparted by the depressed state of vital forces. The term has been so far generalized that, in many places, every severe case of pneumonia is called typhoid-pneumonia.

Course, Duration and Termination. Croupous pneumonia is a well-defined, self-limited disease, which passes through its several stages with considerable uniformity.

The stage of congestion or engorgement occupies the first twenty-four to thirty-six hours.

The stage of exudation or red hepatization—that period occupied by pouring out and coagulation of the exudation, continues up to crisis, which mark the beginning of the next stage. The crisis in pneumonia occurs somewhere

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from the fifth to the eleventh day of the disease, so that the exudation stage lasts from two to eleven days.

The stage of resolution begins with the phenomena of the crisis and lasts two to four days, till convalescence is established.

In the largest number the crisis begins on the seventh day.

In rare cases (abortive form) critical phenomena may occur even earlier than the fifth day.

The whole course of pneumonia is comprehended within three weeks, but favorable cases may terminate in two weeks.

The mortality from croupous pneumonia ranges from five to twenty-five per cent.

In determining a fatal result in croupous pneumonia so much depends on the condition of the individual attacked, or the diathesis with which his system is tinctured, that no comparison of systems of treatment can be accurate that does not take note of them.

Death is usually due to collapse; that is cardiac failure, and obtunding of the nervous centers, with its concomittent symptoms. I will leave this section and say a few words on

Diagnosis. Ordinary well-defined cases are recognized without difficulty; it is the obscure or anomalous forms that occasion mistake.

Pleurisy with effusion is very frequently confounded with pneumonia.

The onset of pneumonia is sudden, by *a rigor,* and followed by a high temperature; pleurisy begins more gradually, there is chilliness for a day or two, and the rise of temperature is gradual. In pneumonia the pain is rather dull, or a feeling of soreness diffused over a considerable space. In pleurisy, a sharp stitch, which can be covered by a finger; in pneumonia there is audible, on inspiration only, a *crackling sound,* the crepitant rale; in pleurisy the friction sound, synchronous with the respiratory movements; in pneumonia, the crepitant rale is succeeded by bronchophony, which continues; in pleurisy, when effusion partly compresses the lung, a modified bronchophony, but when the lung collapses, all voice and breath-sound cease; in pneumonia, the dullness has a tympanitic quality, and is fixed in position; in pleurisy, the dullness is flat, and changes with the gravitation of the fluid; in pneumonia the organs retain their position; in pleurisy the heart is pushed aside and the liver downward by the effusion.

Pneumonia is self-limited and terminates in crisis; the phenomena are wanting in pleurisy, the duration of which is indefinite. Subsequent to the crisis the behavior of the two diseases is so different that further comparison is unnecessary.

Next to pleurisy with effusion, pneumonia is confounded with *catarrhal pneumonia.* They differ in onset—pneumonia sudden, with a rigor and pain in the side; catarrhal pneumonia with an ordinary bronchitis and a feeling of soreness, rather than pain under the sternum; pneumonia as a rule is unilateral, self-limited, terminating by crisis, or ceasing within three weeks; catarrhal pneumonia is bilateral, not limited nor terminating by crisis, and indefinite in duration; if double, which is rare, pneumonia is limited to a portion of either lung, while catarrhal pneumonia is diffused over both. The differentiation of bronchitis and croupous pneumonia rests upon the same points. This much on diagnosis.

Now as to treatment of croupous pneumonia. As we have to deal with a self-limited disease, which terminates by crisis between the fifth and eighth day in sixty per cent. of the cases, and we possess no specific, it is obviously our duty not to interfere too zealously in natural processes, and prevent by our injudicious handling a favorable termination. The so-called expectant plan of treatment is greatly more successful than the spoliation plan of blood letting and tartar emetic—so claim the Modern's. Personally, I think blood-letting in any form, but mainly venesection, in suitable cases, and also tartar emetic, do a great deal of good, but to go on, cautious treatment is all the more necessary, since the *diatheses* are so largely concerned in the origin, the evolution and the termination of this disease. The constitutional tendencies, the actual state, and the surrounding circumstances should receive careful attention in deciding on a plan of treatment. Of

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course a vigorous healthy subject will require and bear a more vigorous handling than a broken down alcoholic.

If seen at the beginning a good dose of quinine, gr. x—xx, and morphine, gr. ¼—gr. ½, should be given; to be followed by a brisk purge of calomel and soda; put a hot mustard poultice to chest and a cool compress to the head; make the patient sweat if possible; a hot flax-seed poultice to chest, and as the disease goes on use some preparation of ammonia, aconitia, digitalis, just as symptoms should require; the diet should be fluid, and stimulants if necessary. Some authorities (Juergensen) advocate cold baths, similar like the Brand method in typhoid fever, but, gentlemen, I think this method too harsh. After the disease subsides, tonics such as iodide of iron, hypophosphites, turpentine, strychnine, eucalyptol, and cod liver oil may be indicated in some cases, but as you cannot treat a case intelligently on paper, I will close, thanking you, gentlemen, for your kind attention.

HERNIOTOMY UNDER LOCAL ANESTHESIA.*

BY ELLIS DUNCAN, M.D.

LOUISVILLE, KY.

A discussion of so familiar a subject as the ordinary technique of herniotomy would doubtless prove tedious and uninteresting, but a few remarks upon a digression from the beaten path, with a report of a few cases in connection therewith, may prove of interest. The digression to which I refer is the use of a local, instead of a general, anesthetic, in this operation.

It would be well to consider, first, the objections, if any, that might exist to the use of a general anesthetic; second, whether, or not, any such objections could be eliminated by the use of a local anesthetic, and whether, or not, there would be any distinct advantages gained; and, third, objections to the use of a local anesthetic.

First—Objections which might arise to the use of a general anesthetic. These might be, in a general way:

1st. The immediate dangers while under the anesthetic, as failure of the heart or respiration, possibly causing immediate death.

2d. Secondary dangers, as shock, uncontrollable vomiting, persistent hiccough, acute nephritis, suppression of urine, or pneumonia.

3d. Advanced age, and the existence of one or more of the maladies incidental to it.

4th. A condition of great prostration or collapse accompanying strangulated hernia, rendering the administration of a general anesthetic extremely hazardous.

5th. The possibility of an immediate recurrence of the defect from straining incidental to vomiting, or to the stage of excitement following the general anesthetic.

6th. The fact that the operator must proceed with all possible expedition in an operation which requires most careful and deliberate work in order to insure uniform success.

Second—Can any of these objections be eliminated by the use of a local anesthetic, and do any other advantages accrue? In this connection it may be said that:

1st. There are no immediate dangers from the proper use of a local anesthetic in this operation.

2d. There are no dangers following it, and no disagreeable after effects, as nausea, thirst, hiccough, etc.

3d. There is no shock from the anesthetic.

4th. The patient being conscious is quiet and there is no danger of immediate recurrence of the defect from straining.

5th. Old age would be no contraindication to the use of a local anesthetic, even if other maladies existed, and in many such cases, the operation would be feasible, when it would not be under a general anesthetic.

6th. A condition of great prostration or collapse due to strangulated hernia would not be a contraindication to a local anesthetic.

7th. Plenty of time may safely be taken, in order to make a careful dissection, and to carry out all the steps

* Read before the Louisville Academy of Medicine.

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of the operation, thoroughly and satisfactorily.

8th. It is not necessary to exhaust the patient as much previous to operation, by so limited a diet and the use of purgatives, as there is no vomiting to fear, and consequently, the patient is stronger when the operation is begun, and can be given water, milk, or other liquids during the operation. After operation, the patient is perfectly comfortable and quiet and can be fed from the start.

Third—Objections to the use of a local anesthetic might be:

1st. The existence of an idiosyncrasy, in such instance there being a possibility of alarming prostration.

2d. The fact that the patient is conscious and able to observe the surroundings and preparations and that he is conscious of the mere fact that he is submitting to a serious operation. In some cases, this might cause great nervousness and apprehension, so that it would, to a greater or less extent, interfere with the operator. It is, also, very probable that occasionally the patient will feel slight pain, and that this will be greatly exaggerated from the fact that the patient is apprehending it.

The following is a report of the cases in which I have used a local anaesthetic:

Case 1. J. B., white, married, age seventy. Admitted to City Hospital August 1, 1903. For six years she had suffered from a right oblique inguinal hernia. When admitted, the hernia had been down several hours and she could not reduce it as previously. Pain was excessive and patient was very weak and in a cold sweat. Impulse could be felt on coughing, but, though taxis failed to reduce the hernia, it became reduced while a hot bath was being given. Patient consented to operation, and on August 3d a Bassini herniotomy was performed under a local anesthetic, a 4 per cent. cocaine solution being used. A few drops were injected into the line of incision first, and after the incision was made, anesthesia was produced in the tissues by application of cotton wet with the same solution. There was some pain complained of by the patient, and the operation was very slow, but every step was carefully carried out, and the operation was satisfactorily completed. Greatest pain was complained of when the adhesions of the neck of the sac were broken up. The neck of the sac was not tied as a pedicle, but was trimmed off, and the peritoneal margins were brought together by a continuous plain catgut suture, just as in ordinary abdominal closures. The conjoined tendon was sutured to the reflected portion of Pouparts ligament with No. 2 Chrom. catgut, interrupted sutures; and the opening in the ext. oblique fascia was closed with a continuous No. 1 suture of the same kind. Skin and superficial fascia were closed by continuous plain No. 0 catgut suture, without drainage. I was unable to locate any nerve trunks in this case.

Result, primary union and uninterrupted recovery.

Case No. 2. J. N., white, single, age 61. Admitted August 6th. About twelve years ago, while carrying a heavy valise, noted a small tumor on right side. Two months later while, doing heavy work, was seized with sudden and severe pain on right side, and the tumor was again evident. After that time, the tumor appeared frequently and finally descended permanently, extending into scrotum. When admitted, he was found to have a large indirect inguinal hernia on right side, which greatly distended the scrotum. On August 8th Bassini operation was performed, the steps being the same as in the previous case, except that the spermatic cord had to be dealt with. The entire operation was performed under a local anesthetic, 4 per cent. cocaine solution being used in the skin for the incision, and the operation completed by sponging with, and the occasional injection of, a 1 per cent. cocaine solution. This operation was slow but could be carried on with great care and attention to detail. The patient made some complaint, most when the neck of the sac was being dissected loose. No drain was left in, and result was primary union and complete recovery. The inguinal branch of the ilio-inguinal nerve was not located positively.

Case No. 3. M. D., white, married,

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age fifty-eight years. Admitted August 8th. Had very large double scrotal hernia, which had become strangulated on one side the night before. It was reduced soon after admission. The hernia on right side was of eight years standing; that on the left about seven and one-half years. Both were indirect inguinal. August 11th a Bassini was performed on right side under a local anesthetic, 4 per cent. cocaine solution for skin and 1 per cent, for deeper tissues. The hernia was a very large one and there was great distension of the external and internal rings with attenuation of their margins. I was hampered considerably in this operation by persistent protrusion of coils of small intestine through the inguinal canal. The same steps were carried out as before described. This operation caused more pain than the previous ones, the most sensitive part again being at the neck of the sac. The peritoneum inside the neck of the sac did not seem at all sensitive. No drain was used and union was primary and recovery complete. The nerve was not located in this case.

On August 14th a similar operation was performed on the left side, practically the only difference being that the inguinal branch of the ilio-inguinal nerve was found and two or three drops of 1 per cent. cocaine solution, injected into it. Scarcely any pain was caused by this operation, but the neck of the sac was again somewhat sensitive. No drainage, primary union, complete recovery.

Case No. 4. H. E., white, single, age twenty years. Admitted August 18th and was found to have a slight incomplete indirect inguinal hernia on right side. He insisted upon operation on account of nearly constant and very severe pain. Hernia only dated back two weeks and was caused by lifting a heavy weight. August 24th a Bassini was performed, 4 per cent. cocaine solution was used for skin incision, and operation was completed by use of infiltration of tissues to some extent with one-half per cent. cocaine solution in 1-5000 adrenalin solution. There was no pain. Technique was same as before described. Inguinal branch of ilio-inguinal nerve was found and anesthetized. No drainage, primary union, complete recovery.

Case No. 5. J. H. D., colored, single, age twenty years. Admitted September 10th. Gave a history of having suffered for several years from hernia on left side. At 10 o'clock on the day of admission, while straining, the hernia became strangulated. All efforts at reduction were unavailing. When admited, late in the afternoon, he was almost in collapse, suffering intense pain, vomiting, and hiccoughing. At 11:45 p. m., about fourteen hours after the trouble began, he submitted to operation. The strangulation was relieved, and several inches of the ileum and a part of the omentum were found in the sac, very much discolored, appearing to be on the verge of gangrene. By the use of hot towels for about one-half hour, the color improved and circulation seemed to become re-established, and contents of the sac were returned to the abdominal cavity. This was found to be a congenital hernia. The Bassini operation was then performed. The nerve trunk was not found. This patient complained considerably, but his complaints were of a rather singsong character, and were not so much the result of pain as of excitement, slight delirium and whisky, which had been given to stimulate him. No drainage was used, and the result was primary union and complete recovery. In this case 4 per cent. cocaine was used for skin incision, and later one-half per cent. cocaine in 1-5000 adrenalin solution.

All of these patients left the table in as good condition as when they were brought to the operating room, and in no case was there any bad effect from the anesthetic. During operation they were given water, milk or whisky, according to indication or the patient's desire. Care was taken to have the solutions of cocaine and adrenalin thoroughly sterile, and in no case did they cause infection.

The Kentucky State Medical Association meets in Lexington May 18th. Make it a rousing one.

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Clinical Memoranda.

MEDIASTINAL ABSCESS. REPORT OF CASE.*

DR. J. HUNTER PEAK.
LOUISVILLE, KY.

Mr. M. R., age twenty-four, was refered to me for treatment by Dr. J. N. Shehan, Maude, Ky., September 1, 1903.

Mr. R.'s family and personal history is very good up to the time of his present illness. He has resided in the country and worked in a country store for years.

History of the case is as follows: January 1, 1903, a small tumor appeared about two inches above the right nipple. On or about March 1, while in play with a friend, the tumor was struck and it disappeared; while there had been but very little soreness or pain before, there now developed great distress in the movement of the right arm and on deep inspiration. About April 1st the tumor reappeared about two inches below the nipple; a short time thereafter it was diagnosed as a cold abscess and was incised by Dr. Gilbert. It continued to drain with more or less inflammatory reaction in the skin and neighboring structures till September 1, 1903. During this time he lost some flesh and was more or less distressed mentally.

I advised exploratory operation, expecting to find necrosis of one or more ribs, and hardly expecting any trouble in the neighborhood of the sternum, the sinus being so far removed from the sternum and the history of the trouble always being out above or below the nipple and with no constitutional symptoms.

Under a general anesthetic a probe could be inserted to a point beyond the median line of the sternum and this entire distance was incised down to the bony structures. It was then found that another sinus led upward from the point about half way on the first and the horizontal incision to a point two inches above and two inches to the left of the nipple; this sinus was also incised through to the bony structures. It was then found that the flaps made by the inverted T-shape incision over lay a large mass of colloid material particularly under the outer flap, or the one including the mamma; this colloid material was especially pocketed by the space between the pectoralis major and pectoralis minor muscle.

All the pockets were broken up and there was irrigated from the space about three ounces of this colloid material. There was very little pus in evidence except at the skin end of the sinus where there was probably a slight mixed infection.

An effort was made to find a diseased rib, but none could be found, and believing that the trouble was probably a colloid degeneration of some enlarged lymph glands, the wound was closed with drainage at the upper and lower angle.

There was no constitutional reaction following the operation, manifested by an elevation of pulse and temperature, but there was a slight infection due to stitch abscesses in the skin, which subsided in a few days after the stitches were removed. The stitches were removed on the fifth day. The wound healed nicely except at one point on the perpendicular incision just left of the nipple which continued to discharge a serus or lymphoid liquid up to the time of January 23, 1904.

He had no pain or soreness and no constitutional symptoms following the operation in September, but between that time and January, 1904, he gained twelve or fifteen pounds in flesh and improved very much in general health.

He consulted me again in January of this year and I found a probe would drop into a sinus to a considerable depth, but nothing like so extensive as the original one. Still believing I had overlooked a diseased rib, I advised another operation. My advice was taken, and on January 23d, under a general anesthetic, I cut out part of the old scar, including the sinus of the perpendicular incision, and found a considerable quantity of necrotic tissue beneath the mamma and under the pectoralis major muscle. I incised this muscle to a point near its outer border

*Reported to the Jefferson County Medical Society, February, 1904.

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for the purpose of drainage and exploration of the ribs. There was another sinus found about half way between the nipple and the old horizontal sinus that was cut out for drainage and rib exploration.

At the sternal end of this last sinus, or at a point between the fifth and sixth rib where they join the sternum, I found a sinus only large enough to admit a small uterine sound. This sinus was found to enter the anterior mediastinum at the lower angle on this side. This sinus was found to be about one and one-half inches in depth.

A part of the fifth and sixth rib and a portion of the sternum were removed and an opening made into the anterior mediastinal space and a quantity of caseous material was removed.

There being no further sinus found to enter deeper into the mediastinum, and believing this was the nidus of his infection, and at the same time feeling that nature had encapsulated the mass at this point, it was deemed best to drain and to close the wound.

On the third day there was systemic reaction, making itself manifest by an elevation of the pulse and temperature. The wound was dressed but showed no signs of infection, but there had been considerable drainage. The drainage material that had been used at either angle of the wound consisted of gauze covered with perforated rubber tissue. This was removed and a new gauze drain was replaced.

Temperature and pulse continued high (pulse 100, temperature 103). The stitches were removed, some on the fourth day and the balance on the fifth day. At site of old sinus there was a suture abscess. The new wound was opened at the juncture with the old sinus; there was some drainage consisting of pus, but not enough to account for his continued constitutional symptoms which lasted up to the ninth day.

On the sixth, seventh and eighth days there was free arterial hemorrhage from the mediastinal opening. Each time the hemorrhage was controlled by the gauze packings in the mediastinal openings and the use of pressure. On the ninth day the dressing was removed without repeated hemorrhage. The patient was placed on the right side near the edge of the bed for the purpose of irrigation when on deep inspiration a great quantity of pus came from the anterior mediastinal space, through the opening made by the resection of the ribs and sternum. In twenty-four hours the pulse and temperature were normal, but drainage remained quite free for four or five days, but now there has been but very little drainage for several days, and the wound is in a condition of slight drainage at the upper and lower angle, this, I believe, is partially being kept up by the presence of a silk ligature that was used in the ligation of the mammary artery.

At the first operation there was no microscopical examination made of the drainage or tissue, but at the last, an examination was made of the tissue, the pus and caseous material.

Dr. E. S. Allen will make a report to the Society as to what he found in this examination.

DR. E. S. ALLEN'S EXAMINATION.

White blood cells (Mono- and polymorphoneucular).

Large giant cells.

Staphylococci and Saphrophytic bacteria.

Tubercle bacilli.

Sections of tissue.

Granulations, cicatricial tissue, pus cells.

AN OBSCURE CASE.

BY W. P. SHELLEY, M.D.

CUTHBERT, GA.

With a hope that I may interest some of your readers, from a diagnostic point of view, I report the following unusual and, to me, obscure case.

On January 8th, 4 p. m., was called to P. L., a well-nourshed male child 18 months old, of healthy parentage. nothing of importance could be elicited from family history. The mother stated that up to two days previous the child had been well, but admitted that child had been allowed to play upon wet ground, and that she had allowed him to eat raisins. I found the child fretful, constipated and temperature 104½. Ordered mild purgative and flushed colon with normal salt solution,

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removing small quantity of very offensive fecal matter. It was somewhat difficult to obtain satisfactory action of bowels, but by persistent effort within 48 hours we secured normal movements, which were much less offensive; however the child passed undigested raisins. This, I thought, would bring reduction of temperature and a speedy restoration to health. The temperature, however, remained high. The child complained that something hurt him, but, of course, could not tell where or what.

On morning of the 12th, four days after my first visit, I found child extremely restless, face flushed, temperature 105½; was told child could not use right side. Upon examination I found right arm and leg flexed, very painful to touch and the slightest effort to move was attended by agonizing pain. The humerus was drawn up into the glenoid cavity, theelbow projecting beyond the surface line of back. I satisfied myself fully that the limbs were not paralyzed. I told family I was not satisfied as to diagnosis, and we would have to await developments.

On 13th, 9 a. m., temperature 104½, symptoms otherwise same, except slight swelling in right knee, some in joints of arm discoverable. For two or three days following no change of importance was noted. Temperature remained high. with slight irregular remissions. On 16th left leg was found in similar condition as the right, except perhaps more acutely flexed, especially the thigh upon abdomen. On 17th child seemed a little better. Temperature 103 at 9 a. m., 104 at 4 p. m. On 18th at 3 p. m. temperature was no higher, but child became suddenly delirious and was threatened with convulsions.

I had consultation but received no aid in diagnosis.

Up to this time the treatment had been expectant and very conservative. The mother nourishing the child at the breast. It was suggested that we withhold the breast and put child on beef peptonoids and broths, letting hydrotherapy take place of medicines. This was done and symptoms remained about the same for several days. On morning of 22d child was worse; temperature by 2 p. m. reached 105½. Meantime well marked symptoms of meningitis developed. The case presented conjugate deviation of eyes to the right, and nystagmus especially well marked in right eye.

At 6 p. m. on the 23d convulsions came on and lasted through the night. During the 24th patient lay in semi-conscious condition without convulsions, but grew rapidly weaker, and died at 10 p. m. on 25th.

If there was effusion in joints it was so slight I could not determine it. The swelling and inflammation in joints seemed to disappear almost entirely before death, but the limbs remained flexed.

Now, as to diagnosis. This was an extremely rare case in this section of the country. It was a case calculated to get the average small town doctor out of his old ruts and put him to studying. A clear and satisfactory diagnostic basis was never reached, consequently the treatment was largely experimental and symptomatic. My first diagnosis was a toxemic condition, due to fermentation in the alimentary canal. As other and new symptoms developed, I was not able to decide between multiple neuritis, infantile spinal paralysis and acute rheumatism. Some of the classical symptoms of each one of these being present and others were absent. From the progress and termination of the case, I was forced to the conclusion that it was polyneuritis. being peripheral at first, but ascended and invaded the coverings of the cord and base of the brain.

If from my description of the case any reader of the Monthly can form an opinion as to correct diagnosis, I would be glad to hear from him.

FISSURÆ MAMMILARES.—Painful slits or clefts (rhagades) of the nipples.

Ichthyoli	8.	(2 drams)
Glycerini	12.	(3 drams)
Lani	20.	(5 drams)

Apply freely *after* nursing, and remove by thorough washing before next nursing.

Glycerini	20.	(5 drams)
Vitelli Ovi	16.	(4 drams)
Balsami Peruv.	1.5	(45 grn.) or more.

Externally.

Balsami Peruv., Sodii Boratis, aa	5.	(75 grn.)
Vitelli Ovi	1.	(15 grn.)
Olei Amygdal. Expr.	30.	(1 oz.)

Externally.

Mercks—Archives.

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Society Proceedings.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Regular meeting, Friday, March 4, 1904, with the President, Dr. Ben Carlos Frazier, in the chair.

CHOLECYSTECTOMY.

DR. A. M. CARTLEDGE: This tumor came on gradually for ten months and was in the median line, but you could put it anywhere in the cavity you wanted to. It was diagnosed as a case of movable kidney, but it proved to be the gall-bladder with a liver the subject of ptosis and movable. You could easily feel the gall-stones in the cystic duct; there are four or five loose ones in there now. There was some hemorrhage where it was separated from the liver. There had been no pain and no history of gall-stones.

EXTRA-UTERINE PREGNANCY.

The woman from whom this specimen was removed was sent to me with a diagnosis of possible cancer of the uterus. Being a very respectable widow, nothing out-of-the-way was thought of. I found the enlargement was irregular and there was a fever history and it made me think of abortion or suppurating fibroid. Something had to be done and on opening the abdomen it was seen to be an extra-uterine pregnancy. The attachments to this blood-clot were very great and there had been an infection of it from the intestines. The remarkable thing was that in dissecting it away from the intestines, we had three perforations and two of these were on the omental border, the hole almost demanding a resection.

No one present thought this woman had the ghost of a chance on account of the intestinal attachment. I used some omental grafts and put in some packing and put her to bed. The gauze was not removed until the 13th day, when it was taken out. She was up in three weeks, having never vomited. It goes to show that an extra-uterine pregnancy must be very bad to lose one.

GALL-STONES.

I removed a large ovarian cyst from a woman, and on opening it found this stone, though there had been no trouble about the gall-bladder.

DISCUSSION.

DR. H. HORACE GRANT: As to the gall-bladder, I saw a case some years ago with the same degree of mobility and the woman had so many symptoms thought to be due to the kidney, that I cut down on the kidney and fixed it. At the end of three weeks I found the tumor as movable as before, and on opening the abdomen found it to be the gall-bladder greatly distended, but with no stones in it. Cholecystotomy gave relief.

DR. LOUIS FRANK: I think the explanation of this case was that she had established an immunity to suppuration already. I believe this can be done, just as in diseases from various infections and this may explain some of the recoveries we have in pus cases, rather than the theory that the pus is sterile.

The gall-bladder case is very interesting and I believe we are not doing enough cholecystectomy. I read a paper along this line two years ago. We have had some literature in this country at various times in advocacy of it, by Richardson especially. In reading the German literature, I have been much struck with the advancement in gall-bladder surgery in Germany. Riedel has done a great many cholecystectomies. A report of his work was published in 1896, when he reported as many as eighty or ninety. They seem to be operating much more frequently than we. and some of their ideas might well be looked into by us. We should do it more as a matter of choice rather than of necessity.

DR. CARTLEDGE (closing): My experience is that wherever the cystic duct is involved, the bile is very slow to come back and you had better remove the gall-bladder. Eight times out of ten you will have trouble afterwards if you do not and will have to remove it secondarily. In the later work of Mayo and Richardson, they lay too much stress on cholecystectomy being the most desirable in inflamed gall-bladder. I have left it many times when it looked red through and through. Wherever

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you have a stone imbedded in the cystic duct for some time, the gall-bladder should always be removed.

SUPRA-PUBIC CYSTOTOMY.

DR. LOUIS FRANK: This specimen was removed from a boy about twelve years of age who had been suffering for several years with symptoms due to the condition of the bladder. I saw him in consultation, a diagnosis of vesicle calculus having been made. He had had attacks of varying duration. Upon examination I found the stone without difficulty and some pus cells were found in the urine. I went in above the pubes and did a supra-pubic cystotomy. The stone had a peculiar shape and I broke it open. I sutured up the bladder and placed in a small superficial drain; catgut was used throughout. The drain was removed after twenty-four hours and the boy was kept in bed on his back, the urine being voided every six hours for the first few days. He went home on the fifteenth day, completely recovered. I was rather criticised at the time for not having gone in below. I find on looking up the literature that in a certain class of cases this is the operation advocated, though I did not know it at the time.

DISCUSSION.

DR. AP M. VANCE: I think Dr. Frank has been very fortunate in this case. If he repeats the operation very often he will find they will not all do so well. If there is any pus in the bladder, the wise thing to do is to go through the perineum in young subjects.

DR. H. HORACE GRANT: I have always felt that I would have a hesitation in doing the ideal cystotomy, closing up the bladder and suturing after an operation. If Dr. Frank had found a clean bladder, he might safely have done what he did, but I think he was unusually fortunate in getting such an ideal result. I have always felt safer in leaving the bladder partly open. The same is true of the ideal cholecystotomy, when I think it is best to be on the safe side and leave an opening. There is so much danger of infiltration that I believe it is not good teaching to advocate an operation of that character. It is a risky procedure to place before the profession, though operations of special skill succeed in such steps.

As to the supra-pubic operation itself for a stone of that size, I think it is the wise step and recovery is more rapid. Where a perineal section is made we have an uncomfortable condition usually afterward. Supra-pubic cystotomy for a stone of this size is very well. Litholapaxy would seem indicated in such a case under favorable surroundings.

DR. A. M. CARTLEDGE: The older I grow the more strongly do I advocate the perineal operation for stone in the bladder. I went away from that idea some years ago and had so much trouble that I am now in favor of the supra-pubic operation for old men and perineal section for the young.

I think we make a mistake in not doing enough dilating of the bladder neck with the fingers. In this way a stone can be removed larger than the first joint of the finger.

DR. FRANK (closing): I do not believe that this would be the operation to do in every case, but I do believe there is no reason why in selected cases we should not close the bladder primarily. If we can get a fairly clean bladder I think it should be sutured primarily. I do not see any more danger of escape of the urine after such primary course than after tearing into the bladder while doing other operations from above, which wounds usually heal nicely after such closure. The only reason for not closing up the bladder would be the septic condition, and if we can do away with this, I think we can close up. In a similar case I would do the same thing over.

I do not believe the supra-pubic operation with closure takes the place of perineal operation in every case. I believe the experience of surgeons like Thompson, who does the supra-pubic operation in children by preference, on account of the damage done even by slight dilatation, is not to be disregarded. Crushing might be carried out where possible, but that leaves no assurance that the fragments have all been removed.

RASH FOLLOWING REMOVAL OF TONSILS.

DR. J. M. RAY: I have a case out of

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the ordinary, rash following the removal of tonsils. A week ago to-day I removed both tonsils and some adenoids and the child was watched closely. The next day it developed a little temperature which subsided, and on the second day after the child broke out with a rash. The family doctor thought it was measles, but the temperature was only about a hundred and the rash was identical with that of measles. There was no irritation of the mucous membrane and no sensitiveness to light. This rash lasted two days and disappeared without any desquamation. The child had had measles about two years before. I find that the London Central Nose, Eye and Throat Hospital reports a number of such cases following removal of tonsils. I used gas and ether in anesthesia.

DISCUSSION.

DR. J. G. CECIL: I was not familiar with the fact that removal of the tonsils would produce a rash. I want to report the fact that there is prevailing in the city now just such a rash as Dr. Ray mentions. I have seen a dozen cases in the last three weeks, the general appearance that of a mild type of measles and the child hardly sick, very little disturbance of any kind. It struck me that Dr. Ray's case might be one of that kind. I have not been able to make out a positive diagnosis, but have called my cases measles, though many of them have reported having had measles before. I have seen one or two cases of the same general type in children who have never had measles, in which it ran a more severe course.

DR. T. L. BUTLER: Is there not such a thing as surgical scarlet-fever?

DR. J. E. HAYS: Dr. Cecil's experience has been mine. I have had two dozen cases like that described by Dr. Ray in persons who have had measles. There is little cough or temperature and no redress of the conjunctiva. The rash usually breaks out on the second day. I look on it as roseola.

DR. BEN CARLOS FRAZIER: I have had a few of these cases myself lately. A young man was brought to see me who had had measles, was not sick but had an eruption and said people were afraid of him. He had no temperature or cough and was a little constipated. The mucous membrane of the mouth was not affected. I told him to go home, that it was only a little rash. The next morning his father telephoned me to come to see him. I found the same conditions, only aggravated, the conjunctiva being reddened, but he was feeling well. The medicine given him had not purged him much. I insisted that he did not have measles and gave him salts. I have not heard from him since.

DR. T. L. BUTLER: I have seen one similar case, but it seemed to me to partake of the nature of scarlet fever. The condition Dr. Ray speaks of is possibly one of those conditions known as "surgical scarlet fever." It is recognized by some, notably the English writers.

DR. A. M. CARTLEDGE: I do not understand Dr. Butler. I have seen but three cases of rash following surgical operations. I have seen them break out when they were septic, and I have seen simple erythema associated with the use of certain drugs. It is impossible for me to conceive of a surgical scarlet fever.

DR. J. M. RAY: I can appreciate the remarks of the various gentlemen, but the family doctor had seen similar cases and this was not erythema because the skin was rough and the face swollen as in scarlet fever. The operation was on Saturday and the eruption on Sunday; I did not see the child until Monday and then it had no fever. The eruption disappeared in three days.

CREOSOTE IN PNEUMONIA.

DR. FRANK SIMPSON: I want to report the case of a child which had typhoid fever and developed pneumonia on the eighth day. I commenced with the creosote and by examination of this chart you will see a rapid decline of the temperature from that day. I have three other charts showing the same thing.

FOREIGN BODY IN THE EYE.

DR. WILLIAM CHEATHAM: A boy was sent to me recently from Alabama with an ulcer of the cornea for which he had had all kinds of treatment, both constitutional and local, since December 10th, without relief. Upon examina-

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tion I found this foreign body in his eye, which looks like the shell of a seed. It was easily removed a week ago; I used boric acid and he got entirely well. It shows the importance of close examination in such cases.

DISCUSSION.

DR. J. G. CECIL: With reference to corneal ulcers, a lady came to see me the other day with very marked corneal cicatrices and she told me she had recently gotten into the hands of a new specialist in town, who promised to remove these scars. I would just like to ask if there is anything new in that line. She is about fifty years of age.

DR. WM. CHEATHAM: The specialist alluded to probably uses electrical apparatus. I was treating a gentleman with diabetes, complicated with retinitis, whom I referred to his family physician. The specialist used a cup on this patient and the eye is now intensely red. He says it is the blood he is drawing out. I know of another lady with hemorrhage in the back of the eye and he said he could not relieve it without putting a needle in it.

PLACENTA PREVIA.

DR. FRANK SIMPSON: Last Monday night I was called to see a woman in the eighth month of pregnancy, who had had a lively hemorrhage. When I got there she had quit bleeding except for a little oozing. I kept her quiet with hips elevated that night and the next day, but about the same time next evening she bled much more. There was no pain. I did not know what to do, but concluded I would get an assistant and deliver her. On examination I found a central implantation of the placenta, so I sent for a physician to give chloroform. There was no evidence of labor and the os was dilated to about the size of a dollar, and this implanation was complete. After she was getting under the chloroform, I attempted to dilate, but about the time I had gotten it about one-third dilated there came a tremendous hemorrhage. I ran my hand into the womb and held it there until the hemorrhage let up. I then pushed through the placenta and brought down a foot. One arm kept getting in the way and the physician was getting scared about the chloroform. I finally got down both feet, then the buttocks and the hemorrhage ceased. Then I made traction and brought the body down. Then came the question as to the life of the child, as I had torn the placenta entirely loose. I made a very rapid delivery of the child and after working about fifteen minutes it revived. I scooped out all of the placenta and the bleeding stopped.

Was I justified in terminating this delivery at once? The child is still living and both are doing well.

DISCUSSION.

DR. AP M. VANCE: I do not think Dr. Simpson could have done anything else, unless to deliver the day before. He could not have left the woman in that condition without a physician present.

DR. JOHN G. CECIL: I think Dr. Simpson is to be congratulated. The only suggestion I can make is that he lost twenty-four hours. When we discover a central implantation at the eighth month, no time should be lost. If there is any question at all, it is as to whether we should force dilatation or tampon and wait for it. It is a good plan to go up alongside of the placenta on one side and tear it loose for a fourth of the circumference, empty the amniotic fluid, tampon and wait for dilatation. I do not think the life of the child is any more imperiled by tearing loose a third of the placenta, with the amniotic sac emptied. Dr. Simpson's method of bringing down the child is regarded as the best in obstetrical practice. Pressure on the cord for five minutes or complete separation of the placenta generally results in the death of the child.

DR. LOUIS FRANK: I think Dr. Simpson's management was very skillful. The only possible criticism would be that he did not do this the day before. Bleeding at any time during the last month of pregnancy without pain is very suspicious of placenta previa. I have had very little experience, but I do not believe in tamponing these cases, for I have seen women do badly under that method; we have men, however, who get brilliant results in this way.

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I think rapid delivery is the thing to do and do not believe we can control the bleeding absolutely any other way. In central implantation we have also to consider the plan of delivery by Caesarean section. For my part, I think the life of the child is worthy of more consideration than it has been given in the past. The statistics show a frightful mortality of the child, and that of the mother is not small. The results following Caesarean section are far better and I believe it should be seriously considered, though not as a fixed rule in all cases, especially marginal. Zincke, of Cincinnati, has tried to popularize this treatment by a number of papers. The outcome of this case is evidence that Dr. Simpson did the proper thing, but the results are not always so satisfactory.

DR. WM. CHEATHAM: I cannot agree with Dr. Cecil. It seems to me that means sure death to the child by that procedure, while Dr. Simpson saved the child.

DR. J. G. CECIL: When I was more interested in obstetrics than I am now, I had the pleasure of reading a report on that subject before the State Society, and I made the suggestion in that paper that Dr. Frank has brought up tonight, that Caesarean section was the thing to do in placenta previa, especially with primiparae. I have never delivered one in which I did not lose the child. The mortality in primiparas must be 96 or 98 per cent. I recall one interesting case I had with Dr. Graham, of Jeffersonville. I sent for my confrere, Dr. Anderson, the only difference in our plan from that of Dr. Simpson was that we tore up one side of the placenta, got the head engaged, and then waited like cats at a mouse-hole for hemorrhage. In that case we got uterine contraction which brought the head down as a block, and after awhile got on the forceps and had control of the case. Still we lost the child, and a week or two later the mother developed central thrombosis and died.

I believe Caesarean section is the thing to be seriously considered, and if I met with a central implantation in a primipara, I would send for a surgeon.

DR. SIMPSON (closing): This uterus dilated very rapidly. In working my hand up, when the hemorrhage came on, I could push my fist into the mouth of the womb, and as soon as I brought the feet down the womb opened up rapidly. It was only forty minutes from the giving of chloroform until the child was delivered.

I would like to report another case which I delivered Saturday night, a woman with a tumor on the left side, and a primipara. It was supposed to be a dermoid cyst. Much to my displeasure when I examined the woman, I found it was a breech presentation. The tumor gave no trouble and she delivered herself promptly without interference. After delivery I examined the tumor and it seemed to be almost detached and not so large as I had thought. It is outside of the uterus.

FIBROID TUMOR CAUSING HEMORRHAGE.

DR. LOUIS FRANK: I reported some time since several cases where fibroids were present. In connection with Dr. Simpson's case, I would like to mention a case I saw shortly before Christmas in Indiana. The woman had been delivered about the fifth or sixth month, with recurrent hemorrhages following. Several days later the physician made a diagnosis of carcinoma of the uterus. I saw her about two weeks afterward and found her in a frightfully anemic condition, with a tumor as large as two fists in the vagina, with a nasty odor. It resembled one of the cases I had mentioned in a paper read some time ago. I did not make the mistake in this case that I did in the former, where I attempted extirpation. I packed around it and controlled the bleeding and cleansed everything out with peroxide of hydrogen, packing with gauze. This was removed every day and the vagina irrigated and the packing replaced. The tumor was four or five inches in diameter and separated completely by ulceration. I was told yesterday that she had completely recovered.

I should think Dr. Simpson's case one of ovarian cyst and it should be watched.

DISCUSSION.

DR. AP M. VANCE: I saw a case many years ago in which I found a catheter in the uterus, which had been there for

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six days. She had had abortions produced six different times and the reason given was that she had a tumor. She had an ovarian cyst on the left side. I took the catheter out and the tumor was removed afterward. It used to be the practice to produce abortion in all these cases.

I remember the case of a girl of fifteen, from Indiana. I got the history from the mother that the girl had first had a tumor and had gone through a seemingly regular labor with hemorrhage and had been disgraced in her neighborhood by the supposed miscarriage. I found in the vagina an immense glandular polypus as large as a large bunch of California grapes. This presented at the vulva and Dr. Cecil and I removed it. It had a stem as big as your thumb. We made an affidavit to relieve the girl of the disgrace of having had a baby.

DR. J. G. CECIL: Dr. Simpson's second case reminded me of one I would like to report. I think it occurred in Dr. Ouchterlony's practice many years ago. There was a fibroid tumor which came down ahead of the child, as large as a cocoanut. It must have had a considerable pedicle, as it was quite movable. During the interval between pains, the woman was put in the knee-chest position, the child pushed up, the tumor dislodged upward and held in this position until the head engaged, and delivery took place without any further trouble. Another feature of the case was that after delivery the tumor could be easily palpated but it disappeared entirely without any operation.

DR. LOUIS FRANK: I saw in Anderson county several years ago a case where there had been a tumor about the size of a cocoanut, attached by a pedicle an inch or two in diameter. During delivery it was a problem what to do, but the tumor was expelled from the vagina with the child. A ligature was thrown around the pedicle and the tumor cut away. In four or five months a new growth was removed secondarily. This case promised to give a great deal of trouble.

PUERPERAL INFECTION.

DR. FRANK SIMPSON: On February 10th I had a case of a woman of 24, primipara. The os was exceedingly rigid and the first stage greatly prolonged. She had great pain and exhaustion but was delivered in about two hours after the second stage came on. She did very well for six days, when a little odor developed and I ordered a vaginal douche. Her temperature then was 99. The next morning she had a chill and her temperature went to 103. On the eighth day she was curetted and it was found that the uterus had never involuted at all. The debris was scraped away but no placental tissue found. She was in bad condition for twenty-four hours and temperature kept up for five days, with a decidedly offensive odor. Six days later her temperature was normal.

This is the third case I have seen in the last two years in which curetting has been done and I have never seen any trouble result from it. I believe curetting is the thing in such cases. Dr. Cartledge objected to the curetting and that delayed the operation for a day. This was my first experience with sepsis in twenty-four years' practice.

DISCUSSION.

DR. LOUIS FRANK: I do not think we can lay down any hard and fast lines about curetting. I am opposed to curetting every uterus. I think the best argument against it is the very case Dr. Simpson reports. I do not believe the curetting had anything to do with recovery, for the temperature did not subside for five days afterward. There was temperature on the seventh day, the curette was used and no placental tissue found, and the temperature remained up for five days.

The more I see of these cases, the less I am inclined to use the curette, unless I have positive evidence that there is placental tissue left. I think it is a very bad proposition. I do not believe we have retention of decidual membranes in all these cases, but that some are caused by imperfect escape of the lochia, with resulting putrefaction. There are other cases where thrombi form and the sinus becomes infected and temperature continues until it has been taken up. In spite of the curette, many of these cases will go on. It has been my plan to give copious

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intrauterine douches or vaginal douches unless you feel absolutely safe on that point. I have seen marvellous recoveries under this treatment.

Where part of the placenta is left behind, it is a different proposition. Where you have an infection of the uterine wall, the only thing to do is to remove the uterus, but such cases are very few in number. The cases that lead to that will do so with or without the curette.

Dr. J. G. Cecil: I am very much of the same opinion as the last speaker. The older I grow in obstetric practice the less use I have for instruments of any kind and especially for the curette. I think Dr. Simpson would have gotten just as good results from intrauterine douches. This the physician should do himself. I am especially opposed to the use of the sharp curette. In puerperal infections at full term the tissues are so succulent that no matter how carefully the operation may be done, there is great danger of further infection. If the infection involves the muscular structures, nothing short of the removal of the womb will remove the focus of the infection.

I would like to report a case which occurred a few days ago. After a long delivery, with forceps on for an hour, we had a furious hemorrhage. I have an idea that it was a low implantation of the placenta which caused it. The woman was very much blanched and her puse ran to 160. We did nothing except give a hypodermic of ergot and adrenaline. We used no douches at all, but were willing to sit by the case and watch. She developed rigors on the second or third day, her temperature running to 103 and remaining up, with a foul discharge. On account of the fear had of injury to the structures, I did not dare use even a vaginal douche but trusted to nature. I had the satisfaction of seeing her come out very well in the course of a week. I am becoming more and more skeptical about interfering with the parturient canal with anything. I do not even use a vaginal douche unless there are special indications.

Dr. Simpson (closing): The value of the curette in this case was demonstrated by the immediate involution of the uterus, which had not contracted at all before. I still think that in those conditions of foul discharge, temperature, sweats, etc., the thing to do is to go back and get out whatever is there. There was quite a quantity of debris scraped out. In the other two cases of this kind, where I was in consultation, the improvement from the curetting was marked and immediate. This woman's temperaure did come down some after curetting and on the sixth day had entirely disappeared. I do not believe even in vaginal douches unless they are necessary on account of a discharge.

TUMOR IN ABDOMEN.

Dr. Ap M. Vance: A man from New Haven dropped into my office recently who has been treated here for stomach trouble, finally getting into the hands of the osteopaths. I examined him and discovered a tumor. He is 35, very anemic, with cold hands, feet and nose. I left thermometer in his mouth for ten minutes and it registered 96; to-day it was 95.2. In the rectum it is 99.2.

The tumor presents exactly as if the bladder were distended. It is hard and perfectly smooth, presenting above the pubes. He has no trouble about his urine, though he empties his bladder quite often. The tumor is movable from side to side and through the rectum can be felt to be quite rough and irregular and very tender. It is a unique affair to me and the temperature was interesting. I think it is malignant and that all his stomach trouble is due to pressure of the tumor on the bowel. I told him to go home and see his wife and come back and I would explore it.

DISCUSSION.

Dr. W. O. Roberts: I had a case very much like it several years ago. He had a tumor in the median line from the pubes, to the umbilicus. One of the gentlemen who saw it thought it was a tumor of the urachus. I explored it and found it to be a sarcoma of the mesentery, which could not be removed. I think that is what this is.

Dr. Louis Frank: I think it is probably malignant. I should think that with a tumor of the mesentery itself,

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the pressure would have caused obstruction of the bowel, and there would be a tympanitic note over the tumor. Besides, tumor of the mesentery would be higher up and more movable. I think it is probably a sarcoma springing from the pelvic bones in front. I saw a case with Dr. Coleman, a policeman with a history of some rheumatic trouble, who developed a slow-growing tumor on the right side. It has been now eight or ten months and when I saw him the other day the entire belly was full of this hard mass, so that his abdomen is larger than that of a woman at full term. The upper part of his thigh is as large as a man's body. The tumor must now be three feet in diameter.

DR. VANCE (closing): That was my idea, that it sprang from the sacrum, until I made the rectal examination. The rectum goes directly under this thing. There is no evidence that it springs from either side and it disturbs nothing on being moved. It may be simply wedged in the pelvis by gravity. Solid tumors do grow in the mesentery and do sag down. His heart was very feeble, and I put him on heart stimulants for forty-eight hours and he improved in his signs. If he agrees, I will open him up.

UNUSUAL EYE CONDITION IN BRIGHT'S DISEASE.

DR. S. G. DABNEY: I saw a case today of some interest. A gentleman told me he had consulted an oculist in New York City a year ago who told him that he did not need glasses or eye treatment, for he had Bright's disease, a diagnosis which proved to be correct. It has seemed to me that the peculiarity of his case is that many symptoms are absent, and even after twelve months his sight and health are fairly good. He has had no headaches, beyond the ordinary, particularly during the last year; and no dizziness, no disturbances of digestion, nothing more than simple shortness of breath and a general feeling of exhaustion. He has considerable edema below the eyes and in his ankles. I found extensive disease of the retina. Oculists classify this condition according to three types: disease of the nerve, the hemorrhagic form, and the degenerative form. This man has a combination of all three. Perhaps the most interesting feature of the case is that his sight has remained almost perfect, and that he seems likely to form an exception to the rule that death takes place within eighteen months after the involvement of the retina. He is attending to his business. His age is forty-four years.

There has been a good deal in the special journals lately on this subject, and they all lay special stress on the diminution of urea, rather than on the presence of albumen.

DISCUSSION.

DR. J. B. MARVIN: I guessed at the man's age before I heard it. This is more of a mixed variety of nephritis. He has more edema and possibly more albumen in his urine and a higher specific gravity than is generally found in simple cases of nephritis. I take it that the asthmatic symptoms are uremic in character and that and the edema act as safety valves and spare his vision. As far as my experience goes, I would put it among the mixed cases where the lesion is not confined exclusively to the interstitial tissues. It probably started as an ordinary case of Bright's disease. Interstitial nephritis is more likely to give arterial and retinal changes at a later age.

I made the statement before this Society at least eighteen years ago, and I had some authority back of me, that we might have a nephritis in one kidney and not in the other, and this explained the renal derivations with albumen and without dropsy. I had a particular case at the time, but I have never been able to find that man since. You do not have dropsy as a necessary symptom in simple nephritis no matter how extensively both kidneys are involved. All recent authorities agree that it is possible to have parts of the kidney affected and not in its entirety.

I would not think this man had a good prognosis, though he may linger along for quite a while.

DR. WILLIAM CHEATHAM: I alluded to a case recently in which one eye was involved and at the post-mortem it was found that one kidney was involved. In reporting it, they gave me credit for having seen the case.

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Dr. J. B. Marvin: I have seen lately a number of cardiac cases with neurotic phenomena which have puzzled me. One was secondary to uremic conditions and has since improved. Two others are more on the order of neuroses. One of these Dr. Bailey has seen, with high pulse, dyspnea and extremely irregular pulse. I have been puzzled in regard to the prognosis. At first I felt uneasy about such cases.

This case has some enlargement of the neck but no other symptom of Graves' disease, but has a pulse very much like that found in exophthalmic goitre. The other case was undoubtedly exophthalmic goitre without the exophthalmos. She had goitre, tachycardia, flashes, sweats, tremor and a fixed look, with eyes fierce but little movement of the eye-lids. I do not think there is any question about that case.

Another case was an old lady who has goitre and a great many of these nervous phenomena. The other case is a typical tachycardia without eye or neck symptoms. It will come on suddenly and when she lies down she has a sensation of spasm about the manubrium, and then the heart goes until you cannot count it, but she looks placid in the face. I saw her first two or three months ago and she has been treated by a number of physicians. I thought the diagnosis was easily made, but this rapid heart beat stops suddenly and the spasm is gone. I suggested nitroglycerine but the tablets did no good. It was then tried in one per cent. solution, and one or two drop doses will cut the attack short. She is nearly sixty years old. I take it the prognosis is not so bad, because there are no renal or arterial changes. I do not like the arterial spasm, however.

In one other case the only suggestion I made was that the physician was seeing her too often and giving her too much medicine. There is no valvular trouble in any of these cases.

Dr. William Bailey: I saw one of these cases a number of times, and it was difficult to make out what the trouble was. The nervous element seemed to be prominent and the spasm, which resembled an attack of angina, was relieved by remedies which relax arterial spasm more than anything else. It was temporarily relieved by morphine and atropine, which are better than strychnine or anything else that I know of. I have seen one or two cases in which nitrite of amyl by inhalation was best of all. In one case it was given for hours, five drops every twenty minutes during the entire night without any evil effects whatever, and continuous relief. The conditions were extreme and were not relieved by morphine, atropine or nitroglycerine. I had them get a drachm of nitrite of amyl and pour five drops at a time on a handkerchief. I see no reason why it should not be employed in such conditions. Nitroglycerine is slower, but perhaps a little more permanent. Of course it should be given by the physician and not entrusted to the nurse. The heart stimulation prevents any evil effects, other than headache which sometimes occurs.

Dr. W. O. Roberts: I had a case of a married lady about fifty years old, with no children. Last summer she sent for me and I found her quite nervous and her periods were irregular. I thought she was passing through the change of life and told her so. On my next visit I noticed that she had enlargement of the thyroid, and while talking to me she was batting her eyes all the time. She told me this had been the case for some time. Her pulse ran up to 120. I put on strychnine, arsenic and tablets of thyroid extract and then gave her iodo-bromide of calcium compound and the symptoms gradually subsided. I kept her in bed most of the time. She had subsidence of symptoms for about three months, but in the last few days the frequency of the pulse and batting of the eyes have returned. I have put her back on the treatment and she has improved some. There has been no recurrence of the enlargement and she has had no ocular symptoms except the batting of the eyes.

Dr. J. B. Marvin: I have seen a few of these cases that got perfectly well and more that would improve up to a certain point and then recur. I watched a typical case for a number of years. I had at the same time a case occurring in a negro woman, which I watched for a long time.

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DR. S. G. DABNEY: I saw a doctor the other day whose wife had exophthalmic goitre and he told me she had been relieved at some sanitarium by injections of goat-lymph. He thinks she is cured.

DR. WILLIAM CHEATHAM: Some of these cases undoubtedly get well. I know a woman who is fifty years old who has wonderfully improved under treatment.

LOUISVILLE SURGICAL SOCIETY.

Stated meeting, Monday, March 7, 1904, with Dr. J. Garland Sherrill, Vice-President, in the chair.

MACROPODIA OR MACROMELIA.

DR. J. GARLAND SHERRILL: This patient is ten months old. The left foot is markedly enlarged, especially the great toe and ball of great toe. Other toes also large; the heel not greatly involved. The right foot shows third and fourth toes webbed and enlarged. The enlargement is congenital and its growth seems to be about in proportion to other development. I have suggested amputation of the first two toes of one foot, but it is a question what should be done with the other foot. The enlargement seems to be more in the soft parts than in the bony structures. There is very little literature on the subject.

DISCUSSION.

DR. THOMAS L. BUTLER: About a year ago I saw a similar case with Dr. Roberts. I took a skiagraph and it showed some of the metatarsal bones to be missing. I do not know what became of the case and can give no advice as to treatment.

DR. J. B. BULLITT: I think the left foot should be studied by the use of the X-rays. I think the webbed condition of the toes of the right foot should be dealt with now. My observation has been that young children stand surgery much better than the older writers taught, if there be no blood loss. There should be very little here. As to the left foot, I think nothing short of amputation at a later date will offer anything.

DR. AP M. VANCE: I never saw a case of this kind. Upon general principles I do not see why we should not operate on this tissue just as upon the normal foot. I would let the child alone for at least twenty-four months, for it must pass through a critical period during the next year which it may not weather. I do not agree with Dr. Bullitt that children of this age stand surgery as well as they do two years later. At that date I would sacrifice two toes on one foot and all on the other foot and pare it down as in amputation at the base of the toe, taking away all this tissue. If that does not heal, then amputation could be considered.

DR. SHERRILL (closing): The first opinion I expressed was similar to that of Dr. Bullitt's, to operate at once on the toes of the right foot. The mother suggested that the child could wear a shoe on the right foot now without amputation. The question in my mind is, whether we could not do something with these soft parts, which are congenital and lymphatic growths. It looks feasible to dissect away the new growth of the left foot, if the bones are not enlarged. If that fails, amputation can then be done. The question of delay is one to be settled by the family, for then the tumor will be much larger. I leave the matter entirely to them.

PULSATING EXOPHTHALMOS.

Dr. Ap M. Vance exhibited a patient who had been the subject of pulsating exophthalmos, previously reported. See page 439.

EXTRA-GENITAL SYPHILIS.

DR. W. R. BLUE: This case is of interest on account of the length of the first period of incubation—five and a half weeks. He is perfectly positive about this. The sore is on the right side of the tongue. Two weeks ago his body was literally covered with macular syphilides. His skin has now cleared up very nicely.

The next case is one exposed on November 17th and the sore appeared at the meatus five days later. It has now been 107 days and the sore has all the appearance of a genuine chancre, though the period of incubation is against it. He has had no secondary

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manifestations, though I have watched him very closely. He has marked lymphatic engorgement.

DISCUSSION.

DR. I. N. BLOOM: A period of five and a half weeks is not unusual. The average is 25 days. It is undoubtedly a chancre of the tongue. As to the other case, I do not believe a chancre will appear in five days and whatever sore may have appeared at the meatus, the true chancre must have appeared later on. Recently I had a case of a man who had a chancroid on that portion near the scrotum and it ended with a chancroid in the meatus and I noticed how much it resembled some of the chancres I had seen. I think mistakes of this kind can very easily be made. A man can convey the virus with his fingers to his penis as well as to his eye.

In a paper read at another meeting, I stated that I had seen chancres in nearly every part of the body except the eye. One of this kind was referred to me by Dr. Cheatham to-day. I also had the pleasure recently of diagnosing a chancre of the upper lip, making two extra-genital chancres since that meeting, which shows how common they are.

DR. WM. CHEATHAM: The case referred to by Dr. Bloom was that of a man who was married about two months ago and has had this sore on the eye-lid for about five weeks. I think there must have been an abscess on the lid and this was inoculated with the chancre. He has a sinus running down for quite a distance into the lid.

"MALIGNANT" SYPHILIS.

DR. H. H. KOEHLER: This patient is 27 years of age; parents alive and healthy; no venereal history in other members of family. Patient enjoyed best of health up to three years ago, when he had his first venereal sore; single. Circumcised, recovered and two months later cicatrix broke down, but healed under local treatment; broke down again and healed; under another physician for about a year. Has a history of recovery and recurrence under purely local treatment. No trace of other manifestations during that time. Ulcer extended slowly and at one time involved the abdominal wall and scrotum but healed under local treatment.

Entered Kentucky University clinic September 10th. Penis inch and a half long, with a large ulcerating surface nearly two inches across on end. Inguinal glands only slightly involved. Treatment local with permanganate wash with iodoform emulsion applications. Little or no benefit.

October 3d, place curetted and specimen removed for examination. Diagnosis of syphilis made and patient placed on potassium iodide and dose rapidly increased. Slight improvement. Recurrence again and four gummata appeared on scalp. Patient then taking sixty grains potassium iodide four times daily. Bichloride and protoiodid tried without effect.

December 1st subcutaneous injections established—mercury, lanolin, albolin—6 gtt. to gr. Hg. Injections every four days. All symptoms healed by Christmas. Patient then disappeared and did not return until last of July, when all symptoms appeared in aggravated form. A large gumma had recurred on scalp and the cicatrix on penis had again broken down. Injections were again instituted, 25 minims being injected on two occasions with marked benefit, so that now the ulceration on the penis has again healed and that of the scalp markedly diminished.

There has been no abscess formation on the buttocks or any symptom of salivation. Iodide of potash has also been administered up to forty drops four times a day. The local treatment has been cleanliness of the parts and application of mercurial ointment.

DISCUSSION.

DR. W. R. BLUE: The destruction of tissue is quite marked and it is a question whether it is due altogether to the breaking down of a gumma. There may have been other germ infection. I have used the bichloride mercury injected hypodermatically. I recall a case of rupial syphilides several years ago in the clinic of Hebra of Vienna, in which one of the syphilides was as large as my hand. All the syphilides disappeared under the injection of half a grain of mercury (bichloride) in normal salt solution once a week. I have

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had occasion since to use the bichloride in late cases with excellent results. Some local application should be used in many cases along with the constitutional treatment. Hebra drives the injection into the muscles of the back instead of into the buttocks.

DR. I. N. BLOOM: I am glad to hear of the use of the gray oil of Lang because here there has been almost no use of it, though it has been known for a long time. Only recently has it been revived, first the injection of calomel, then of the yellow oxide and then the gray oil of Lang, and it has given excellent results. I have tried it and found it superb but patients will not agree to its use. I got one abscess with every five injections. A nodule forms and abscess may follow after several weeks. I regret that I do not use it more frequently.

DR. G. C. HALL: I think the most remarkable thing is that he has had no other manifestations except this gummatous condition in his head and the trouble with his penis. After these injections had been started, all manifestations entirely healed up. The first four gumma appeared on his scalp while he was taking iodide of potash four times a day. When they healed up he stopped coming and there was a recurrence. We have given him about four injections since his return. About ten days ago he was getting so bad that I concluded to run the risk of salivating him and injected twenty-five minims, and he has had no symptoms of salivation, and five days later I injected another twenty-five minims. I injected into the buttock. I am also giving him forty grains of iodide of potash four times a day.

DR. H. H. KOEHLER: Several years ago I used calomel in olive oil and got an abscess as the result. Since using this gray oil I have had no bad results and the symptoms disappear like magic. I think it is absolutely essential in malignant syphilis.

SCLERODERMA.

DR. H. H. KOEHLER: This patient is 61 years of age, a teamster. He is the nineteenth of twenty-four children; only the last four grew up. No tubercular or venereal history. Sick only twice in his life, the last time being twenty-eight years ago. Appetite good; sleeps well; organs normal; urine negative; gets up at night to pass water and has done so for two or three years. Arcus senilis well marked.

Present trouble is confined to anterior surface of lower limbs, and began six months ago with itching and burning. Left leg first affected; the skin became darker over small area, finally thinned and became adherent to sublying tissues, surrounding atrophic patch. The skin about is puffy and vascular. Leg above the patch is distinctly swollen. At one time the patch was covered with a layer of adherent scales, which have been removed by treatment. On a corresponding place on the right leg is a patch beginning to form; skin appears darker and thinned; is not decidedly adherent. It burns and itches like other leg, but changes in surrounding skin not so marked. A piece of skin was excised from right leg at circumference of the patch. Hemorrhage was profuse and controlled with much difficulty. Excised portion hardened in Zenker's Fluid, imbedded in collodion and stained with haemo-eosin.

Authorities agree that in this disease the changes in the skin are not characteristic, the greater alteration, however, occurring in the corium. The specimen presents the following characteristics, the examination having been kindly made for me by Dr. Hall: The epidermis as a whole appears thinned, there being fewer number of layers than normal. The stratum corium is well marked. No stratum lucidum is apparent. The stratum granulosum is at places well marked and contains an abundant pigment. In the rete two well marked changes are apparent. (1) The interpapillary spaces are deficient in places, almost a straight line existing between the columnar cells and the corium. (2) In direct antithesis to this, a decided prolongation of cells extending into the corium and tending to enclose certain elements of that structure; in a small degree similar to condition found in skin carcinoma and the commencement of epithelial pearls. The basement membrane of the rete is deeply pigmented and takes a decided hemotoxylin stain.

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In the corium the following points may be made out: (1) Flattening of the papillae and occasional epithelial prolongation. (2) Instead of the epidermis resting on a bed of loose cellular tissue containing a variable amount of fat, there is no fat at all, explained possibly by the anatomical situation. The tissue is thick and dense, arranged parallel to the surface in large bundles, like a hyaline degeneration, though a feeble cellular element is apparent between some of the fibres.

The walls of the vessels, especially those in the superficial parts, are decidedly infiltrated and surrounded by a mass of cells. Their lumen is decidedly narrowed.

DISCUSSION.

DR. I. N. BLOOM: My diagnosis would be varicose ulcer because I never saw scleroderma in the colored race. I may be wrong because I do not know the pathology. I have seen thirty cases in the white and there is an absence of the parchment condition, which is pathognomonic.

DR. W. R. BLUE: I never saw a case of scleroderma in the colored race. I am inclined to think that if this were in a white it would be called eczema rubrum. There is always a thickening of the skin and they look very much alike under the microscope.

DR. J. B. BULLITT: I would like to ask if there is such a condition as varicose ulcer of the leg without an ulcer. It seems to me that this is one.

DR. H. H. KOEHLER (closing): I am not positive about the diagnosis, but I do think it is not very far fetched. I have never seen it in the colored race, but I do not see why they should not have it.

DELAYED UNION IN FRACTURE OF THE JAW.

DR. J. GARLAND SHERRILL: This patient was injured on December 23d by being struck on the jaw. He had no treatment for a week, but it turned out to be a fracture. A bandage was put on, but this proved irksome and there was some pain, owing, perhaps, to the inclusion of nerve fibres. He came to me five weeks ago with an abscess on the side of his jaw. The jaw was quite movable. I opened the abscess and curetted the fractured surfaces, doing an incomplete operation. There is now fairly good union. I used copper wire but there was only one tooth behind that I could use and two in front. The wires were not taken off for about four weeks. The abscess healed promptly. This is a different character of case from those to be treated of in the essayist's paper. I used copper wire because my brother tells me that is what the dentists use, and I found it to answer every purpose.

DISCUSSION.

DR. A. M. CARTLEDGE: I do not think it is right to classify these cases as delayed union because that is the case so often when the fracture is compound. I have seen it a number of times and they are not like united fractures elsewhere, for they will heal in time.

The most ingenious treatment for cases of this kind that I ever saw was that of a country doctor in Georgia. Instead of wiring the fracture, he made a grooved splint of rubber and put it over the teeth and made an outer splint of thin board held by a screw connecting a small steel bar. It was as solid as the Rock of Ages.

CYST OF THE PANCREAS.

DR. J. GARLAND SHERRILL: The patient was a school teacher, referred by Dr. Solomon, age 20, white. Usual weight 187, present weight 147. He was not a regular drinker but took an occasional spree, smoked cigarettes moderately, never had any venereal disease. His father died of la grippe merging into some pulmonary trouble, possibly tuberculosis; mother died in labor. One brother died at birth and one sister in infancy; four brothers are well and strong.

November 14, 1903, he ate quite a lot of chestnuts, following which he felt well. November 15th at ten a. m. was seized with acute pain in epigastrium following a hearty breakfast. This pain lasted a day and was constant, but with paroxysms of exacerbation. Vomited several times and was only relieved when the chestnuts were expelled after an enema. Vomited up a lumbricoid worm. Was confined to bed for a week but improved during the second week.

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Then a relapse occurred, but not so severe as first attack, and the pain came on without the patient taking food for some hours previously. He complained of constipation and of pain at the umbilicus and above right clavicle in front, also under the right scapula. No fever noted at any time. The pain lasted about a week and was followed by soreness and weakness, attack lasting three weeks. During this time he lost thirty-six pounds.

Since then he has had occasional pains in the abdomen, flatulency and muscular weakness. His stools are clay-colored and formed. He is hungry at all times and is not fully relieved by eating. Slight jaundice was present during the second attack. Does not sleep well and has pain in back when recumbent. Has been vomiting for last two weeks after drinking water.

Examination: Tumor is apparent in lower epigastrium, smooth and elastic. Lower margin is on level with umbilicus and it extends laterally farther to the left than to the right. Pain is elicited by pressure at a point two and a half inches below ensiform; flatness on percussion over entire swelling, about twelve inches laterally and eight perpendicularly. It merges into liver dullness on right side and descends lower on left side, merging with kidney and splenic dullness. The wave of fluid is clearly perceptible and apparently fluid is surrounded by a capsule. Stomach resonance can be made out in epigastrium, but over a very small space. The colon lies below the tumor except on right side, where the hepatic flexure extends beside the growth. Slight pulsation over growth. On the table just before operation, the stomach resonance can be determined between tumor and liver. Pulse 70, temperature normal; fifteen ounces of urine passed in 24 hours with S. G. 1030 and no abnormal constituents.

Operation March 5, 1904, by median incision. A thick-walled cyst of greenish cast was found presenting between the stomach and colon, pushing stomach upwards to right. The colon could be separated from the growth, being connected by an omentum an inch and a half wide. Spleen and right kidney were free but lying close to the growth. Liver margin was free but gastrohepatic omentum was quite tense. The cyst sprang from the anterior and upper surface of the pancreas from near the head to the tail. Two gallons of fluid about the color of fresh cider were drawn from the cyst and effort made to dissect the growth from its attachments, but after colon was separated and its omentum ligated, it was found that the attachment to the stomach was so intimate as to prevent extirpation. We therefore completed the operation by a partial excision and suture of sac to the abdominal wound.

He left the table with pulse 140, which soon fell to 112 and remained there until 3 p. m. of the following day, when it suddenly reached 138. It fell to 102 on following morning, to again fall soon after, and became imperceptible. Temperature rose gradually to 102 in axilla and during last hour to 105 in rectum. The abdomen was not greatly distended and he did not complain of much pain. On the left side of the incision crackling could be elicited, due to gas formation probably as the result of the digestion of the tissues by the ferments from the cyst.

The cyst was unilocular with a very thick wall and a small soft concretion was found inside it, which contained cholesterine, calcium carbonate and bile coloring matter. Report on fluid: Two gallons; yellowish brown; alkaline; Sp. gr. 1007. Epithelial cells, red blood cells, white blood cells, tissue, no pus, no mucus, no animal parasites, crystals of cholesterine. Trypsin and amylopsin.

DISCUSSION.

DR. A. M. CARTLEDGE: I do not think Dr. Sherrill should be too much discouraged over losing this patient. There are few pancreatic cysts that are easy to enucleate. I recall one case some time ago where the cyst had evolved quite low and after going through the omentum I got it out like a large goitre. It was removed entire. If he had not drawn off any of the fluid, he might have had better success, for it is almost impossible to enucleate a collapsed sac. There are cases where it would be at all times fatal to attempt enucleation. The first case I had I diagnosed as

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pancreatic cyst and stitched the sac and let out the fluid. She got well after a long period of drainage. Enucleation will save time if it can be done.

DR. AP M. VANCE: I had one large cyst of the pancreas, which got well by stitching the sac to the skin. The diagnosis was made beforehand.

DR. SHERRILL (closing): The enucleation seemed to be easy at first, but the adhesions to the stomach were so intricate that the effort was abandoned. The cyst pushed forward between the stomach and colon, the stomach being displaced upward and to the right side.

Current Literature.

Ford, W. W.: Early Diagnosis of Cirrhosis of Liver Considered from Pathologic Standpoint.—(*Univ. Penn. Medical Bulletin*, February, 1904.)

Ford has analyzed the cases of cirrhosis of the liver encountered in the first 500 autopsies in the Johns Hopkins Hospital. In practically all the cases, with the very few exceptions noted, the cases of beginning cirrhosis of the liver were associated with renal disease, cardiac affections and arteriosclerosis. No case of advanced cirrhosis of the liver has been seen in Baltimore in connection with chronic malarial intoxication. He remarks on the experimental, apart from the clinical, data as to the production of cirrhosis, and says there seems to be little doubt but that alcohol has much to do with the production of the condition, but from the experimental standpoint there is no very reliable evidence that alcohol alone can cause fibrous proliferation. Alcohol of itself is not sufficient to start tissue proliferation. Experimental cirrhosis in spite of all the work that has been done, is only in exceptional cases sufficiently definite to bear searching pathologic criticism. The essential factor in the production of fibrous tissue increase can not be made operative. What that factor is can only be determined clinically. We may eliminate from consideration all syphilitic cases, cases of chronic infection and the rarer cases of anthracotic cirrhosis or of malarial cirrhosis, and the few cases of biliary cirrhosis dependent on disease of the bile passages, and still have left the vast majority of cases of atrophic cirrhosis and a considerable number of cases of beginning cirrhosis in all of which the hepatic disturbances are part and parcel of some more general disturbances of nutrition whose pathologic effects operate on kidney, heart and liver alike, but whose primary etiologic factors are as yet unknown.—*Journal American Medical Association.*

Obituary.

Dr. Charles Norton Mourning, aged 27 years, died on April 16th, of uremia, at the residence of his father in this city.

Dr. Mourning was a graduate of the Hospital College of Medicine, and afterward attended post-graduate schools in New York City. He practiced in Louisville for several years until forced to abandon his work because of ill health. He staid for a while in Indian Territory, returning to Louisville the first of January, opening an office with Dr. Karony in Crescent Hill. He had been complaining for several days, and was found dead in bed on the morning of the 16th.

He was buried from the Second Presbyterian church on the 18th.

Correspondence.

SOMERSET, KY., April 1, 1904.

Editors Louisville Monthly Journal of Medicine and Surgery.

GENTLEMEN—I see in the April number of your journal where Dr. I. N. Bloom reports a case of syphilis in which the period of incubation was sixty-one days. He states that hitherto he has been very skeptical in regard to the cases of a long period of incubation. I wish to report three cases. In two of them the period of incubation was sixty days, and in the third three months. All were well developed cases of syphilis. They were men well known for truth and veracity, and I am satisfied they told the truth in regard to the period of incubation.

Yours truly,

SAM N. SCOTT, M. D.

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Louisville Monthly Journal

OF MEDICINE AND SURGERY.

"Alis Volat Propriis."

VOL. 10. LOUISVILLE, MAY, 1904. NO. 12.

EDITORIAL STAFF

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HENRY ENOS TULEY, A.B., M.D., ACTING EDITOR.

TINNITUS AURIUM.

Reik (*Johns Hopkins Hospital Bulletin*) contributes a new method of treating this troublesome symptom of ear disease. In discussing its etiology he differs from the accepted theories; that the foreign body in the canal or the inflammatory exudate in the tympanum produced a direct pressure on the tympanic membrane and ossicles, and indirectly through the foot plate of the stapes upon the endolymph of the internal ear, and causes a simulation of the effect of a regular succession of sonorous waves upon the membrane.

As a result of animal experimentation it has been shown by the author, that any irritation of the tympanum will cause marked vaso-motor disturbance and that this vascular change is invariably in the direction of vaso-dilation; that irritation of the sensory nerves of the tympanum produces a depressor, and not, as might have been expected, a pressor, effect. In the second place, these experiments have shown that any exudate into the tympanum like the pathological conditions that exist in catarrhal affections of the ear, however small, will produce a like effect, and, that this vaso-motor change commences with the entrance of the first particle of fluid introduced into the tympanum and before there can be any question of increased intra-tympanic or intra-labyrinthine pressure. It appears that irritation of the tympanum causes a dilatation of the small blood vessels of the middle and internal portions of the ear, and that the sounds produced by the increased flow of blood in the neighborhood of the delicate terminal filaments of the auditory nerve are sufficiently loud to be appreciated by the person so affected, and that sometimes they are sufficiently loud to be heard by the examiner.

As a result of this experimentation his conclusion is that tinnitus should be treated by such remedies as are calculated to raise the blood pressure. Local application of the extract of supra-renal gland did no good, but more success was met by giving two grains of the extract, t. i. d., in tablet or powder.

THE ATLANTIC CITY MEETING, A. M. A.

At the New Orleans meeting of the American Medical Association, the House of Delegates selected Atlantic City as the meeting place for 1904, because of its superb hotel facilities, and upon the assurance that there would be no advance in rates. The anouncements of the Hotel Committee prove this assertion.

Atlantic City is an admirable place for the meeting of this body, which has grown so fast in the past few years, and should attract a large gathering from this section of the country.

Special train service has been arranged by this JOURNAL via. Louisville & Nashville and Pennsylvania railroads, leaving Louisville June 6th, arriving at Atlantic City, without change of cars, June 7th.

The Trunk Lines Association has granted a one fare rate for the round trip, which will bring the trip within reach of all. June is an admirable season in which to visit the seashore, the crowds are not so great as later in the year, and accommodations can be had at any price desired. Go and take your wives, for an enjoyable outing by the sea.

THE PACIFIC COAST AND THE AMERICAN MEDICAL ASSOCIATION.

The California State Medical Society has invited the American Medical Association to hold its next annual meet-

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ing, 1905, in California, and Oregon and Washington will make an effort in the same direction. The *Journal of the California State Association* takes the *Journal of the American Medical Association* to task for stating that no meeting of the A. M. A is likely to be held on the Pacific Coast for some years to come, in which contention we quite agree, as this is a subject to be decided by the House of Delegates and not by the *Journal.*

The *Journal* also argues that the time of the busy Western practitioners is just as valuable as of those in the East, who find it fully as difficult to attend a meeting on the Atlantic Coast as they of the East a meeting on the Pacific Coast.

A MAN WITHOUT AN APPENDIX.

At an operation performed by Dr. H. C. Dalton, St. Louis (*Medical Mirror*), who presented the classic symptoms of appendicitis, no appendix could be found. The cecum was found quite inflamed for an extent of four or five inches, and thickened, but without adhesions. At the normal site of the appendix a depression was found which seemed to be composed only of serous and mucous coats.

The cecum was mopped with hot wet sterilized gauze and replaced, the patient making an uninterrupted recovery.

SYPHILIS HEREDITARIA TARDA.

The possibility of the development of syphilis in children apparently previously healthy, at or near puberty is denied by some, but as positively affirmed by other eminent syphilographers. These latter claim that the classic symptoms of infantile, hereditary lines may be present, but to so slight a degree as to go unnoticed, with development of characteristic manifestations later.

Abt (*Medical Standard,* April, 1904), contributes an interesting article upon this subject. The disease may begin in the third year, increasing in frequency from the fourth to the tenth year. Bone lesions occur frequently. Periostitis, its most common form, joint lesions and cranial localizations are also seen.

Skin lesions are found usually about puberty, resembling lupus; coryza is very frequent, lymphnodes also. Hutchinson's triad of symptoms are interstitial keratitis, labyrinthine or central deafness and deformity of upper incisor teeth.

PROF. PAUL EHRLICH.

In connection with the recent celebrations by the University of Chicago, the visit of Prof. Paul Ehrlich, director of the Royal Institute for Experimental Therapy, located at Frankfort-on-Main, is of peculiar interest to the medical profession.

To no other man, perhaps as to Ehrlich, is medicine so indebted for valuable bacterilogic discoveries and original investigations in sero-therapy. To him, largely, was due the general adoption of a standard for diphtheria antitoxin. He delivered an instructive lecture at one of Chicago's theatres while there upon the "Modern Views of Toxins and Antitoxins," which was well received. The press describes him as a man of about fifty years of age, with an air of the student in full mastery of his subject.

Book Reviews.

A Practical Treatise on Nervous Diseases for the Medical Student and General Practitioner.

By F. Savary Pearce, M.D., Professor of Nervous Diseases in the Medico-Chirurgical College of Philadelphia, etc. Colored frontispiece; ninety-one illustrations in the text. New York and London. D. Appleton & Co. 1904.

We like the method in which the author has begun his subject, for instance the chapter on anatomy and physiology are so blended as to make their mastery a much easier matter for the student. Then follow General Pathology, Symptoms and Methods of Examination, General Therapeutics, and several chapters on special diseases of the nervous system.

No subject is dealt with in detail, but each is excellently summarized. The illustrations are excellent through-

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out. A criticism which is well founded but seemingly of little avail is upon the constant use by the publishers of the use of "u" in color and other similar words.

* * *

The Man Who Pleases and the Woman Who Charms.

By John A. Cone. Third edition, 1904. Hinds & Noble, 31 15th St., New York, N. Y.

This book is rather unique, dealing with the needs of the present generation. The Art of Conversation, Good English, Tact in Conversation, Good Manners, Dress, Personal Peculiarities, etc.

Much can be gathered from a study of this little book, to place the man in a position to please his fellows, and the woman to charm. It is pleasingly written, in every respect an original creation.

* * *

The Eye—Its Refraction and Diseases.

By Edward E. Gibbons, M.D., Assistant Surgeon of the Presbyterian Eye, Ear and Throat Hospital; Demonstrator and Chief of Clinic of Eye and Ear Diseases in the University of Maryland, Baltimore. New York. The Macmillan Company. 1904.

This is a subject of little interest to the general practitioner, but to the specialist this book will prove of great value.

The subject of optics is a mathematical problem, and a work which will give the mathematical formulae instead of the simple deductions will prove of greater service to the student. These must necessarily be illustrated freely to make the subject matter clear. This is what we find in this book. We find nothing which has been omitted, and can thoroughly commend the book.

* * *

Commoner Diseases of the Eye.

By Casey A. Wood, C.M., M.D., D.C.L. Professor of Clinical Ophthalmology in the University of Illinois, etc., and Thomas A. Woodruff, M.D., C.M., L.R.C.P., Professor of Ophthalmology in the Chicago Post-Graduate Medical School, Chicago, etc. 250 Illustrations; 7 Colored Plates. 500 pp. 5x8 in. Bound in Green Buckram, Gold-title and Top. $1.75 net.

This book should have a ready sale, as it is written from the standpoint of the needs of the general practitioner. Unquestionably even the commoner diseases of the eye are frequently neglected because of the inability of the average practitioner to obtain the desired information in regard to them from the fulsome and technical volumes on the eye. The illustrations, for the most part original, are excellent.

* * *

Manual of Clinical Microscopy and Chemistry, prepared for the use of Students and Practitioners of Medicine.

By Dr. Hermann Lenhartz, Professor of Medicine and Director of Hospital at Hamburg, etc. Authorized translation from the Fourth and Last German Edition, with Notes and Additions, by Henry T. Brooks, M.D., Professor of Histology and Pathology at the New York Post-Graduate Medical School and Hospital; Member of the New York Academy of Medicine, etc. With 148 Illustrations in the Text and 9 Colored Plates. Pages xxxii-412, Octavo. Bound in Extra Cloth. Price, $3.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

To the Germans we are indebted for much original work in the details of microscopic technic, and any faithful translation of a standard work upon microscopy should prove of value to practitioner and student as well.

The translator has brought to his aid notes of the author's from his fourth edition of the work, now in press, as well as his own large experience as a teacher and practical worker in this line.

The work is elementary, going into detail in many chapters, but for this reason the more valuable to the student and worker in this branch of medicine.

* * *

Diseases of the Intestines, A Text Book for Practitioners and Students of Medicine.

By Max Einhorn, M.D., Professor of Medicine at the New York Post-Graduate Medical School and Hospital, New York. Second revised edition. New York. Wm. Wood & Co. 1904.

But few changes have been made in this edition from the first, which we had the pleasure of commending upon its first appearance.

In the subject of Dysentery, the researches of Shiga are mentioned, which brings it entirely up to date. The book is a companion to the author's treatise upon Diseases of the Stomach.

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GENERAL INDEX.

Contributors to Volume X.

Abell, Irvin 249
Allan, B. A. 45
Barbour, Philip F. 256
Bate, R. Alexander 374
Bloom, I. N. 221
Blue, W. R. 371
Bond, A. H. 141
Bullitt, James B. 216, 421, 452
Butler, Thomas L. 260
Cartledge, A. Morgan 17
Cecil, John G. 85
Cheatham, Wm. 7-64
Dabney, Samuel G. 98-129
Dixon, Arch. Jr. 463
Duncan, Ellis 469
Evans, T. C. 125-296
Field, D. L. 139, 379
Flexner, J. A. 412
Frank, Louis 134, 178, 395
Frazier, Ben Carlos 205
Godshaw, C. C. 176
Glahn, Jacob 55, 174, 465
Grant, H. Horace 245
Greene, Francis M. 61
Hammond, L. F. 226
Hancock, D. O. 285
Jennings, W. B. 143
Kennedy, Orville A. 105
Layne, P. C. 171
Mansfield, Cassius Dudley 132
Meyers, Sidney J. 291
Montgomery, F. H. 101
McMurtry, Lewis S. 325
Peake, J. Hunter 472
Ray, J. Morrison 335
Ravitch, M. L. 339
Richardson, John B. 293
Rhodes, John H. 16
Roberts, W. O. 367, 406
Samuel, F. W. 46
Shelley, W. P. 473
Sherrill, J. Garland 332
Simpson, F. C. 375
Skinner, C. 401
Spears, L. P. 60
Speidel, Edw. 252
Stucky, J. A. 211
Stucky, T. H. 92
Taylor, W. L. 225
Tuley, Henry Enos 168
Vance, Ap Morgan 327, 459
Vance, James 165
Walker, Edw. 57
Wathen, John R. 417
Woolery, Perry 11
Wyatt, R. R. 295

Editorials.

A Man Without an Appendix 491
Anesthesia 80
Are Consumptives Under An Unmerited Life Sentence 363
County Medical Societies 81
Department of Commerce and Labor..... 395
Early Signs of Pregnancy..... 441
Fourth of July Tetanus..... 200
Gastro-Intestinal Diseases in Infancy..... 80
Hemorrhage 363
Kaiserling Solution 364
Loves' Death 81
Medical Representation on the Panama Canal Commission 441
Medicine as a Profession..... 121
Memphis 200
Mississippi Valley Medical Association..... 239
Occiput Posterior Positions 278
One Hundred Cases of Appendicitis..... 78
Pitting in Smallpox 161
Prof. Paul Ehrlich 491
Puerperal Eclampsia 314

Digitized by Google

Puerperal Septic Infection 120
Profession of New York 394
Renal Decapsulation 120
Ringworm 79
Status Lymphaticus as a Cause of Sudden Death 239
Syphilis Hereditaria Tarda 491
Tetanus 240
The Atlantic City Meeting, A. M. A. 490
The New Orleans Meeting 40
The Obstetricians' Fee 40
The Pacific Coast and the American Medical Association 490
The Pullman Sleeping Car 315
The Christian Hospital of Chicago 81
Training School for Nurses 159
Typhoid Perforation 395
Value of Physician's Services 394
World's Fair Exhibit of Medical Journals 364
Yellow Fever 160

Obituary.

Lewis D. Kastenbine, M.D. 157
Jesse C. Hancock, M.D. 158
Hawkins Brown, M.D. 312
Hamilton A. West, M.D. 361
Charles Norton Mourning, M.D. 489

Original Communications.

Abscess, Sub-diaphragmatic 22
Abortion, Sepsis Following Labor and 66
Abdomen, Perforating Wound of 112
Abdominal Viscera, Perforating Wound of 110
Abdominal Disease, Surgical Treatment of 134
Abdominal Surgery, A Case or Two in 459
Abdomen, A Plea for More Accurate Diagnosis in Diseases of the Upper 178
Abscess of Brain 274
Acid, Tri-chlor-acetic in Ear Diseases 436
Acromegalia 374
Address of President Dr. B. A. Allan 45
Adrenalin 64
Adenoids, Naso-Pharyngeal 211
Advice, Some to Give, and Some Not to Give—The Tuberculous 463
Air Passages, Foreign Body in the 146
Albuminuria, Significance of 105
Amputation 354
Anemia, Pernicious 192
Aneurism, Popliteal 390
Appendicitis 383
Appendicitis Complicating Gall-Stones 26
Appendicitis, Time of Operation in Primary 77
Appendicitis from the Standpoint of the Patient 129
Appendicitis, Chronic 352
Appendix, Perforated 305
Appliances, New 426
Asphyxia Neonatorum 252
Ataxia, Hereditary, Frederichs 191
Ataxia, Locomotar, With Optic Nerve Degeneration 273
Bladder, Scrotal Hernia of 16

Digitized by Google

Blood Examination for the General Practitioner 101
Bowel, Carcinoma and Sarcoma of 332
Brain, Abscess of 245
Brain, Gunshot Wound of 310
Brain, Syphilis of 341
Breast, Tumor of 271
Cæsarean Section 1
Cancer of Rectum 46
Cancer of Intestine 117
Cardiac Tonics, Indications and Contraindications 92
Carcinoma, Gastric 205
Carcinoma and Sarcoma of Bowel 332
Cataract, Congenital 35
Children, Mental Defects in, and their Prevention 11
Cholelithiasis 264
Colon, Resection of Head of 301
Cough, Reflex Uterine 64
Cranium, Compound, Comminuted Fracture of 191
Cystitis in an Infant 298
Dermoid Cyst of Ovary 272
Dermatologic Clinic of Europe 339
Digitalis 85
Diphtheria 289
Dietetics, Practical Points in 291
Diverticulum 306
Diabetes Mellitus 412
Dysentery, Epidemic 225
Edema, Tracheotomy for Laryngeal 426
Elephantiasis 145, 298
Empiricism and Medical Commercialism 139
Enteritis, Gastro 226
Epithelioma of Skin 303
Erysipelas 229
Exophthalmos, Pulsating 424, 439
Fibroid Subperitoneal 235
Fibroid Tumor 299
Fracture, Intra Capsular of the Femur 293
Fractures, Ununited, and their Treatment 453
Finsen Light Apparatus 65
Gastric Carcinoma 205
Gastro-enteritis 226
Gall Stones 300
Gall Stones Causing Intestinal Obstruction 367
Glaucoma 125
Gonorrhea in Children 113
Hairs, Harshness of the 141
Hand, Surgery of the, in Factory Practice 60
Head Injury 184
Headache 379
Hernia, Scrotal, of Bladder 16
Hernia, Strangulated 112
Hernia, Strangulated, with Fibroid Tumor of Uterus 273
Herniotomy Under Local Anesthesia 469
Hip, Congenital Dislocation of the 421
Humerus, Ununited Fracture of 145
Humerus, T-fracture of 439
Hysterectomy 76
Ileum, Strangulation of the 109

Digitized by Google

Infant Feeding, Every-day Problems in 168
Influenza in Children 256
Intestinal Surgery, Some Clinical Observations in 327
Intestinal Obstruction Due to Gall Stones 367
Intubation, Prolonged 21
Labor, Management of the Third Stage of 132
Laryngeal Papilloma 296
Life, Chemistry of 174
Malaria vs. Sewer Gas Poisoning 119
Mastoiditis 428
Mastoiditis, Surgery of Acute 335
Menstruation, Anomaly of 229
Myofibroma 307
Nasal Bones, Fracture of 110
Neurosis, Reflex Nasal 7
Osteomyelitis 303
Ovary, Dermoid Cyst of the 233
Palate, Complete Congenital Clefts of 216
Pancreas, Surgery of the 417
Papilloma 307
Paraffine Injections of Nose 391
Placenta Previa 307
Peritonitis, Tubercular 23
Perineal Section 34
Pertussis as an Etiologic Factor in Uterine Displacements 143
Peritoneum, Tuberculosis of 325
Perineum, The 401
Prostatectomy for Hypertrophy 29, 266
Prostatitis, Chronic Gonorrheal 171
Prostate, Enlarged 185
Pneumonia 465
Pneumonia, Anesthesia 30
Pneumonia, Croupous 375
Pregnancy, Tubal 266, 298
Pyosalpinx 313
Pyloric Stenosis 17
Radiograph showing Tuberculosis of Knee 32
Rectal Surgery, in the General Practice of Medicine 285
Saddlebags, To My—An Ode 295
Salpingitis 165
Salpingo-Ovaritis 352
Sarcoma and Carcinoma of Bowel 332
Sarcomata, The 371
Sexual Perversion, A Rare Case of 176
Seminal Vesicles, An Instrument for Stripping 354
Skull, Fracture of 267
Strychnia Poisoning 383
Supra-renal Extract in Eye and Throat Practice 98
Syphilis, Prognosis in Acquired 221
Syphilis of Brain 341
Syphilis, Three Cases of 437
Testicles, Atrophy of from Mumps 392
Tetanus 406
Testicle, Tuberculosis of 345
Tinnitus Aurium 490
Toe, Perforating Ulcer of 390
Tonsillotomies, Forty, in Fifty Minutes 228
Transylvania University, Early History of 161

Digitized by Google

Tri-chlor-acetic Acid in Ear Disease 426
Tuberculosis of Peritoneum 325, 347
Tuberculosis of Testicle 345
Tuberculous, The, Some Advice to Give, and Some Not to Give 463
Typhoid, Erythema Following 35
Typhoid, Perforation in 76
Ununited Fractures and their Treatment 453
Uterus, Fibroid Tumor of 30
Uterus, Intraligamentary of Fibroid Tumor 352
Uterus, Fibroid Tumor Multiple Myomatous 352
Uterus, Inversion of 28
X-Rays, Their Action on Physical Organization 55
X-Rays, Some Experiences with, as a Therapeutic Agent 57
X-Rays in Treatment of Skin Diseases 114
X-Ray in Surgical Tuberculosis 260
X-Ray Stereoscope 440

Clinical Memoranda.

An Obscure Case 473
Mediastinal Abscess, Report of Case 472

Current Literature.

Adrenalin and Its Uses in General Surgery 313
Every Day Headaches 361
Intestinal Indigestion 156
Local Analgesia 156
Pasteurized, Sterilized or Clean Milk 155
Pseudo-Hemaphroditism 393
Roentgen Ray in Obstetrics 155
Sterilization of Catheters 119
Topical Treatment of Gonorrhea in Women 238
Uterine Curettage 199

Society Proceedings.

Alumni, Louisville Medical College 20
American Protologic Society 194
American Roentgen Ray Society 311
Jefferson County Medical Society 75, 116
Louisville Academy of Medicine 311, 360, 390
Louisville Surgical Society 26, 72, 109, 303, 354, 432, 386, 484
Medico-Chirurgical Society 21, 35, 64, 145, 227, 298, 358, 424, 383, 475
Mississippi Valley Medical Association 197

Book Reviews.

Pages 14, 41, 81, 162, 203, 241, 279, 321, 366, 397, 442, 491

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